THIS WEEK'S NATIONAL PETROLEUM NEWS

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Coming Meetings

American Society of Mechanical Engineers, National Oil & Gas Power meeting, Oil & Gas Power division, Hotel Mayo, Tulsa, Okla., May 8 to 11.

American Institute of Chemical Engineers, Wilmington, Del., May 14, 15, 16.

American Petroleum Institute, 5th Mid-Year Meeting, Mayo Hotel, Tulsa, Okla., May 14, 15, 16.

National Assn. of Purchasing Agents, Oil Buyers' Group Session, Waldorf Astoria Hotel, New York, May 20 to 23.

Virginia Oil Mens Assoc., & Virginia Oil Jobbers Assoc., annual meeting, Patrick Henry Hotel, Roanoke, Va., May 23 and 24.

American Petroleum Institute, Eastern District, Production Division, Wm. Penn Hotel, Pittsburgh, Pa., June 5, 6.

National Petroleum Assn., Fire and Safety Marshals, Knight of Columbus Auditorium, Oil City, Pa., June 6 and 7.

Northwest Petroleum Association, North Dakota Division, Powers Hotel, Fargo, N. D., June 10, 11.

Chicago Service Station Operators Assoc., Medinah Club, Chicago, June 11 and 12.

Society of Automotive Engineers, summer meeting, Greenbrier Inn, White Sulphur Springs, W. Va., June 16 to 21.

American Society of Chemical Engineers, Cincinnati, Ohio, June 19, 20, 21.

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Theodore R. Goebel

The new president of the Natural Gasoline Association of America, Theodore R. Goebel, obtained his first glimpse of the southwest when Uncle Sam moved him from his home in Jersey City, N. J., to Camp Bowie, at Fort Worth back in war days.

He liked the southwest so well that, when he was mustered out, he joined the Sinclair Refining Co.'s accounting department at Fort Worth. That was in 1919. He was moved to Tulsa in 1920. In 1922 he joined the Skelly Oil Co. as chief accountant.

His activities in connection with the natural gasoline industry began when he was named manager of the gas contract department of the Skelly organization, several years ago. He was particularly active in the work of drafting the present uniform gas contract.

About four years ago Mr. Goebel was named executive assistant in the Skelly company, which position he now holds.

NATIONAL PETROLEUM NEWS

VOLUME 27 NUMBER 19

Institute Petition to Congress First Gun In Battle Against Further Regulation

By V. B. Guthrie
N. P. N. Managing Editor

CHICAGO, May 4

A BURST of handclapping from a closed suite in the Stevens Hotel, in the early evening of May 3, heralded a public announcement of great import to the oil industry of the nation.

A very few moments later, President Axtell Byles, of the American Petroleum Institute, hurried forth to be engulfed in a group of reporters and other interested persons, who had waited all day in the corridor.

Mr. Byles' face was beaming. "It's unanimous," he told the group. "Did you hear the applause!"

Thus he announced that some 40 directors of the institute on behalf of the oil industry, had all agreed to petition Congress against further regimentation of the oil industry in the name of the New Deal at Washington.

The petition expresses the view of the industry that users of petroleum products are "best served when competition is free, when the operation of economic law is unhampered and when the profit incentive stimulates initiative and inspires invention."

In concludes with the statement that sufficient progress has been made toward recovery to consider "methods of orderly development of business as a substitute for devices created in moments of national emergency and desperation."

It states that the oil industry will do its part to further recovery, "if it can but know clearly that its efforts are not to be checkmated by constant change, bureaucratic dictation or usurpation of power.'"

The following five-point program of policy in the matter of government regulation over oil is set forth in the petition:

First, a minimum of either state or federal regulation.

Second, that state governments be encouraged in the effort to regulate production of crude oil and natural gas to prevent waste and in the interest of conservation.

Third, that the federal government supplement the production control efforts of the states by making permanent and enforcing the Connally Law, by approving the interstate compact already ratified by five oil producing states, by fact finding, through the Bureau of Mines, to determine supply and demand for petroleum products and by exercising control over imports.

Fourth, the petition asks freedom of industrial control over marketing, pointing out that, as concerns this branch of the industry, where competition is keenest, the oil industry should not be singled out for federal intervention.

Fifth, "that any such economic straitjacket as is contained in S.2445 (the Harrison Bill to extend the NIRA) or similar proposals for the enlargement of the NIRA would serve to increase the price of gasoline and demoralize the industry.

In short, the oil industry, or at least that great proportion of it which is made up of companies represented on the directorate of the Institute, proposes to stand up and fight openly against further federal regulation of this industry.

This is a direct reversal of the policy the industry at large has followed the past two years in its relation with the oil administration at the nation's capital. These two years the industry has "taken it lying down," the public talking being done almost entirely by the small fractions which profit on

The complete text of the petition to Congress adopted by directors of the American Petroleum Institute, in a meeting at Chicago May 3, is published as a paid advertisement by the institute on pages 24F and 24G of this issue.

"hot" oil and on distress markets.

The fact that this proposed plan of action was approved unanimously by the Institute directors is hardly of less importance than the program itself.

This is one of very few occasions when the Institute has taken up a controversial subject having to do with the fundamental policies of the oil industry and it is the only time there has been unanimity of opinion.

As recently as last fall, at the Institute's annual meeting at Dallas, the directors split on this same subject of government regulation. A minority favored endorsement of federal regulatory laws, such as the Thomas-Disney bill defeated at the last session of Congress and the present Thomas oil control bill. The majority approved a compact among the principal oil producing states as the vehicle for securing necessary regulation of crude oil production.

The petition to Congress of some 2700 words in length endorsed at the directors' meeting here is likely only the first gun in the industry's battle to present its own case to Congress, the rest of Washington and the industry at large; for a reversal of policy in its public relations so heartily endorsed it is believed, will not stop with only this expression of views.

The petition was to be presented to the Vice-President and the Speaker of the House May 7, to place it in the official formal manner before Congress. It is then to be made widely public in paid newspaper space. The petition is presented, in advertising space paid for by the Institute, in this current issue of NATIONAL PETROLEUM NEWS, to bring it officially before the oil industry.

The text of the petition to Congress had been in the hands of the executive committee of the Institute since April 24, but most of the other directors attending the Chicago meeting read it for the first time when the meeting opened at ten in the morning. There were present eight or ten directors who favor federal control over production of the type set forth in the present Thomas bill. J. D. Collett, present chairman of the Planning and Co-ordination Committee, was among these and he became informal chairman of this group, which desired to endorse a general program of policy towards government control, on behalf of the oil industry and still feel that they were not reversing their position in favoring a federal law of the type of the Thomas bill.

SOME other members of the P. & C. Committee were of this group also, namely B. L. Majewski, Deep Rock Oil Corp., Chicago, representing marketing interests on the committee, and C. F. Roeser, independent producer of Texas. Among others having the viewpoint of this group were W. N. Davis, Phillips Petroleum Co.; E. A. Landreth, another Texas producer; Roy B. Jones, Panhandle Producing & Refining Co., Wichita Falls, Texas. Included in the group also was Russell B. Brown, general counsel for the Independent Petroleum Association of America, representing producers. Mr. Brown is not an Institute director but bore the proxy of Wirt C. Franklin, president of the association and former chairman of the P. & C. Committee. This association sponsored the present Thomas oil control bill now before Congress.

After some general discussion when the meeting opened, at which there was debate over the lengths to which the administration might go in control over the oil industry, if the present Thomas bill and the Harrison bill to extend the NRA were passed by Congress, this group withdrew to study the petition as an expression of their own views. It may be significant that the changes they finally proposed were in phraseology only and not in the substance of the petition.

Declines to Comment

WASHINGTON, May 7.—Asked if he would comment on the American Petroleum Institute's petition to Congress, embodying the Declaration of Policy, adopted at Chicago May 3, Administrafor Ickes pondered a few moments, then said; "No, I thought of something, but I won't say it."

A reference to state governments as having the sole power to regulate production of crude was changed by eliminating the word "sole." Another reference to state government, regarding recognition of its responsibility in conservation matters, was changed to make the reference apply to government in a general sense.

In the fourth plank of the proposed program of policy with regard to legislative regulation, the original draft of the petition contained a statement to the effect that unfair methods of competition in distributing petroleum products should be handled through the regularly established agency of the Federal Trade Commission. This was changed during the discussions of the day to provide that industrial pacts and agreements, when voluntarily made by any industry for the purpose of eliminating unfair methods of competition, should be permitted.

Only one vote was taken on the motion which was made when the meeting opened to approve the petition to Congress and, while that vote followed many hours of discussion, it was unanimous when it was taken. In fact it was more than unanimous, it was enthusiastic, as the burst of handclapping indicated.

Very few visitors were present at this session of the Institute directors. One was P. J. Hurley, Secretary of War in the Hoover cabinet, who has been counsel on the subject of interstate compacts for Governor Marland, of Oklahoma, initiator of the compact which has now been endorsed by the legislatures of five of the oil producing states.

Preliminary to the main business before the directors, a new institute treasurer and two new directors were elected. Dan Moran, Continental Oil Co., becomes treasurer in the place of Frank Phillips, Phillips Petroleum Co., resigned. H. A. Logan, United Refining Co., Warren, Pa., was elected a director, to fill the unexpired term of Frank B. Fretter, deceased. C. M. Boggs, Kanotex Refining Co., Arkansas City, Kans., was made

(*Continued on page* 14)

THE EDITORS' VIEWPOINT

Segregate the Profits in Financial Statements

By Warren C. Platt, Editor

THE agitation for a complete physical and operating divorcement of producing, pipelines, refining and marketing has a laudable objective but, on second thought, one wonders if the method of approach is correct.

What is sought is to have every major oil operation stand on its own legs financially so far as its profit and loss are concerned. This business of selling crude oil as gasoline is what is condemned. Companies with big low cost crude production and others with low cost pipeline transportation, or both, have been operating their refineries and marketing stations at a loss while making good money on the first two departments.

That may be legal and good business for those particular companies but it is hardly fair competition to others in the industry, nor is it sound business practice for the industry as a whole. Any day any of these companies may run out of low cost crude and, despite all they can do, not be able to develop any more, while other companies discover a pool of cheap crude. Then the boot will be on the other foot and it probably will pinch a bit and we probably will find some new members to the "divorce 'em now" club.

If every company had to show on its balance sheet every time it is published just how much it made and lost on its several major departments, we believe there would be such an uproar from the stockholders and from the competition and the general public as to cause those companies to so mend their ways as to put each of the four major departments on its own legs and make each show a profit.

Publicity and education should bring about the change. With one or two large companies leading the way the others would follow in the course of time. Already we have the Barnsdall company actually breaking up these departments into separate companies. That example will help the thinking of the industry.

Whether Congress can enact legislation to force companies in interstate commerce to show their operations separately, we do not know. Perhaps the new securities commission, which is regulating the type of statements of companies whose stock is listed on a public stock exchange, may be able to require a financial showing by these major departments.

That would appear to be the easiest way to attack the problem because the commission is charged with bringing out all the facts necessary for the investing public to properly judge the actual worth of a company. Would not an investor be interested in knowing that all the good profit of a given company came from only its producing and pipeline properties and that the company is losing its shirt on refining and marketing?

Would not such knowledge cause the would-be investor to pause and wonder if that is the kind of management he wants to place his dollar on? He wants a management that can and does run a business, and not a speculation based on how long the crude oil can be produced at a few cents a barrel cost and how long there will be any crude for the pipeline to carry.

But when it comes to breaking up these four divisions physically, making it impossible for one ownership and one management to run the whole, one should be rather skeptical. All four of these activities dove-tail into each other very closely. You cannot have a big refinery without making sure of sufficient crude over a sufficient period of time, of a certain known quality and from a given area. You must have all this to have any reasonable certainty as to your plant. It is one thing to buy a couple of thousand barrels of crude a day for a small refinery that has no lubricating equipment but it is something entirely different to protect a plant running 50,000 or 100,000 or 125,000 barrels a day of crude with complete by-product equipment and employing several thousand people. You cannot put such a plant on a flat car and move it around as new fields come in with employes' families following in their Fords, which is actually what happens with some of the small plants.

Pipelines too have to have an assurance of their capacity in crude in order to be made to pay. And not every big pipeline has made money either.

But we believe the agitation is along the lines of good business, providing actual physical divorcement is not sought. A business that is losing lots of money in half its departments and making money on the other half is not a sound business and it is not healthy competition. The ideal business is one that is making reasonable money on EVERY ACTIVITY. That shows it is well managed and that it should be here to stay for a long time. It is to be hoped the oil industry gets on that basis as soon as possible.

Institute Petitions Congress

(*Continued from page* 12)

a director to fill the unexpired term of Howard Bennette, deceased. Resolutions in memoriam of Fretter and Bennette were adopted.

Directors present were: Richard Airey, Asiatic Petroleum Corp.; T. H. Barton, Lion Oil & Refg. Co.; W. R. Boyd, Jr., executive vice-president of A.P.I.; D. S. Bushnell, Northern Group of Pipelines; Axtell J. Byles, president of A.P.I.; J. D. Collett, O'Keefe & Collett; Frank R. Coates, Henry L. Doherty & Co.; W. N. Davis, Phillips Petroleum Co.; H. M. Dawes, The Pure Oil Co.; Otto Donnell, The Ohio Oil Co.; J. Frank Drake, Gulf Oil Corp.; L. J. Drake, Union Tank Car Co.; W. S. Farish, Standard Oil Co. of New Jersey; W. H. Ferguson, Continental Oil Co.; W. S. Fitzpatrick, Consolidated Oil Corp.; H. R. Gallagher, Consolidated Oil Corp.; W. M. Irish, Atlantic Refining Co.; A. Jacobsen, Amerada Petroleum Corp.; Roy B. Jones, Panhandle Producing & Refining Co.; H. T. Klein, The Texas Co.; B. L. Majewski, Deep Rock Oil Corp.; Jacob France, Mid-Continent Petroleum Corp.; Clark Kountz, Sinclair-Prairie Pipe Line Co.; E. A. Landreth, Landreth Production Corp.; F. A. Leovy, Gulf Oil Corp.; L. L. Marcell, Socony-Vacuum Oil Co. (White Eagle division); J. Edgar Pew, Sun Oil Co.; J. Howard Pew, Sun Oil Co.; Charles Roeser, Roeser & Pendleton, Inc.; E. W. Sinclair, Consolidated Oil Corp.; Harry Sinclair, Consolidated Oil Corp.; W. G. Skelly, Skelly Oil Co.; E. L. Smith, E. L. Smith Oil Co., Inc.; W. E. Smith, Standard Oil Co. of Kentucvky; R. W. Stewart; W. C. Teagle, Standard Oil Co. of New Jersey; J. W. Van Dyke, Atlantic Refining Co.; R. L. Wheelock, Wheelock & Collins; W. V. Hartmann, Gulf Refining Co.; E. J. Bullock, Standard Oil Co. of Indiana; E. G. Seubert, Standard Oil Co. of Indiana.

Producers' Association Opposes Federal Control Over Oil

By Telegraph

OKLAHOMA CITY, May 7

OPPOSITION to "any legislation that would provide for federal control of the petroleum industry, or the making of the industry a public utility," was incorporated in a resolution unanimously adopted here by the directors of the Independent Petroleum Association of America. The directors were in session May 6 for their semi-annual meeting.

While the directors voted opposition to federal control, they nevertheless included in the resolution endorsement of such "federal legislation as is necessary to provide for the conservation of our natural petroleum resources and the stabilization of the petroleum industry."

They also asserted that such legislation, "to accomplish these purposes permanently and effectively" must include the principles adopted at the association's annual meeting in Fort Worth last December. These principles were made a part of the resolution adopted today.

The directors disposed of the NIRA by including in the resolution the declaration; "We oppose the new proposals that have been made pertaining to the National Industrial Recovery Act, such as S-2445, but do favor an extension of the principles contained in the present NIRA."

An attempt was made to bring up for general discussion the petroleum code, but Marvin Lee, of Wichita, after stating that, if the meeting got into a discussion of what changes should be made in the code it would be in session for two weeks, offered a motion, which carried, that the executive committee of the association be instructed to handle the matter when and if the code is brought up for revision.

The association's president, Wirt C. Franklin, was unable to attend the meeting because of illness. Howard Fell, executive vice president, reported, however, that Mr. Franklin's health was considerably improved.

The directors adopted resolutions of appreciation for both President Franklin's and Senator Elmer Thomas' efforts in the association's behalf in legislative matters. Most of the morning session was taken up with a general resume of proposed legislation in Washington, Russell B. Brown, the association's general counsel, making the report.

Mr. Brown said considerable work had been done in connection with the Thomas oil control bill, but that it was going to be hard to get the bill passed unless; "We get our representatives and senators fired to tell our story up there."

* * *

Stripper Well Assoc. Meets

OKLAHOMA CITY, May 7.—The annual meeting of the National Stripper Well Association is being held here today. It is a federation of oil and gas associations of the oil producing areas of the U. S., its purpose being to protect the interests of stripper well owners and operators, employes and royalty owners.

Matters in connection with revisions or extension of the oil code pertaining to stripper wells will be taken up. Proper determination of costs of producing oil from stripper wells will be discussed.

Refinery Board Adjustments

WASHINGTON, May 3.—April gasoline allowable was increased by 150,000 barrels, according to an announcement today by Administrator Ickes. This, together with 150,000 barrels of turn-backs of April gasoline allocations, was used by the Refinery Board of Review to take care of appeals granted at its last meeting: Col-Tex Refining Co., 20,000 barrels; Sinclair Refining Co., 60,156 barrels; Standard Oil Co. (Indiana) 276,000 barrels.

New Proposal Would Remove Intrastate Business Entirely from Codes

By A. M. Petty
N. P. N. Washington Bureau

WASHINGTON, May 4

WHILE the Senate this week was debating the Clark resolution to extend the NIRA "as is" until next April, the United States Supreme Court took under advisement the Schechter case concerning the poultry dealers' code which may bring quick death to the Blue Eagle in its present incarnation.

Friends of the recovery act in the Senate protested that the Clark resolution, favorably reported by a vote of 13 to 4 of the finance committee, would kill the NIRA just as certainly as if it were permitted to expire June 16.

Conditions attached to Senator Clark's proposal to extend the present NIRA would deal a "death blow" to the oil code, according to the consensus of several oil lawyers here. It would grant wholesale exemptions which would nullify effectiveness of the code, they said.

Several constitutional lawyers who sat in on the argument of the Schechter poultry code case said that questions by the court indicated a majority believe the NIRA is invalid as an "unconstitutional delegation of legislative power to the President."

They predicted that when the supreme court hands down its decision, expected late this month or early in June, it will declare the recovery act and all its codes void. The grounds will be the same as in the Panama-Amazon decision on the oil section, Sec. 9C, namely, that the act sets up no standards and does not require a finding of facts by the President before promulgating a code as law.

Several of the justices were sharply critical of the minimum wage provisions in the poultry code, which the defendant is charged with violating.

"By what standards was it determined that 50 cents an hour was a fair minimum wage?" was one inquiry. Solicitor General Reed could only point out that the President had found that the group sponsoring the code was representative of the industry and that the code did not oppress small enterprise.

Donald Richberg, general counsel for NRA, was permitted to present without interruption the argument for federal regulation of intrastate business because of its effect on interstate commerce.

The court's apparent lack of interest in Richberg's argument, coupled with the hammering at Reed's defense of "delegation of power," has led some observers to predict that the decision will not rule on Richberg's point.

If the court finds that the NIRA is void as an invalid delegation of power, then it may avoid passing on Congress' power to regulate, through the codes, business that is wholly intrastate.

THIS would leave the way open for Roosevelt to seek an entirely new law which would set up adequate standards and otherwise meet the court's expected objections to the present NIRA.

With a valid delegation of power, however, the question of federal authority to regulate local business would still be hanging in air. It would probably remain unanswered for a year or more. It took more than 18 months for the Schechter case to reach the supreme court.

If the court throws out the present NIRA, the Clark resolution goes by the boards.

Following a meeting May 1 of the Senate finance committee, at which the limited extension of NIRA was agreed upon, newspapermen were told that there would be two "simple" conditions. These were to be (1) prohibition of price-fixing in any code, except those for mineral natural-resource industries which now contain such provisions, and (2) no trade engaged wholly in intrastate commerce would be eligible for a code.

It was believed then that the resolution would have no effect on the oil code because it now contains price-fixing provisions (although never used) and the oil industry is not a "wholly intrastate trade."

As formally reported to the Senate May 2, however, the resolution set forth the limitations, as follows:

"No price fixing shall be permitted or sanctioned under the provisions of any code; except that provisions for the regulation of prices under governmental control may be included in codes for those mineral natural-resource industries in which prices are now fixed pursuant to the provisions of any code and which the President finds to be so affected with a public interest that such regulation is necessary and proper in the public interest.

"No code of fair competition shall be applicable to any person whose business is wholly intrastate."

Because the oil code's price-fixing provisions have never been invoked, some oil lawyers believe that the new wording kills the Oil Administrator's power to fix prices under Sect. 6a, Art. III of the oil code.

These lawyers also assert that the second condition would "emasculate" the oil code by exempting operators in all branches who are engaged in a "wholly intrastate" business.

It would disrupt efforts at crude production control under the code and probably would exempt from code provisions those marketers and refiners whose operations are confined to a single state, it was said.

Federal regulation of local business under NIRA and the codes is predicated on the theory that such transactions "affect" interstate commerce and are therefore within the scope of Congress' power to regulate commerce, these lawyers explained. But the Clark proposal, by its wording, would exempt from the codes all persons en-

gaged in a "wholly intrastate" business, even though their activities "affected" interstate commerce.

Oil code provisions for production control have not been a great factor in Texas, Oklahoma or Kansas because these states have their own oil laws. But in California and other states which at present have no state oil control statutes, authority for proration comes from the oil code, it was pointed out.

These lawyers take the view that the Clark resolution would exempt from proration orders in California and these latter states all producers whose oil does not enter interstate commerce. It was pointed out that federal production control, under the code, is based on the fact that while oil production is *not* itself commerce, excessive production adversely affects commerce in petroleum.

Adoption of the Clark resolution or even the invalidating of NIRA by the supreme court would not affect operations of the Federal Tender Board in East Texas, it is believed. The tender board operates under the federal Connally law, which is entirely separate from NIRA, it was pointed out.

A tender board could not operate in California, however, because such board's duties are to co-operate with state authorities in seeing that no oil produced in violation of *state* law is shipped in interstate commerce. California has no state law now.

As regards marketing, some oil lawyers say that the Clark resolution would exempt small operators, while binding major companies. Situations might arise where a filling station on one corner would be exempt from the code marketing rules while the major company station across the street would not be, they said. The reason advanced was that the independent station would be a "wholly intrastate" business while the major company might be operating in a dozen states.

While Roosevelt is opposed to the Clark resolution, he would probably accept it as a face-saving measure if convinced that he could get nothing more from Congress. In fact, his intimation to Senate leaders that he would not veto the resolution led Chairman Harrison to bring it out of the finance committee.

House leaders seem inclined to stand for a two-year extension of NIRA on the President's own terms.

Sentiment in the Senate seems against the President's plan, as embodied in the Harrison Bill (S. 2445), for tightening up the NIRA and extending it for two years.

Friends of the NIRA sought a compromise. In the finance committee they tried to tack an amendment on the Clark resolution which would have made the extended codes also cover intrastate business which affects interstate commerce. A similar effort probably will be made when the resolution comes up for a vote.

Advocates of price-fixing for the oil industry probably will seek to restore the original wording of the resolution so that the oil administrator's power to invoke price-fixing may be retained in the oil code.

Agreement Reached With Station Operators

INDIANAPOLIS, May 4.—Discussions between representatives of employes and representatives of managements of several of the leading oil companies in Indianapolis, including Standard Oil, Shell and Socony-Vacuum, which have been under way for several weeks, have terminated with an agreement on wages and conditions said to be satisfactory to both employes and management.

The conditions established at Indianapolis are announced to be effective for one year, from May 1, and from year to year thereafter unless employers or employes request changes within 60 to 30 days prior to March 1, of any calendar year.

For the most part, the conditions decided upon were already in force in the companies' operations. Changes consist largely of adjustments involving scattered individuals.

The announcement of the companies' policies came after a series of meetings between representatives of the oil companies and of the filling station union. These meetings were noteworthy in that there was at no time any serious danger of open conflict between the managements and the employes, it was stated.

New Deadline in Cleveland Drivers' Negotiations

CLEVELAND, May 7.—Rumors hold the center of the stage in the local labor negotiations between the oil companies and petroleum truck drivers and service station operators.

At a meeting April 30 of representatives of the drivers' union and the oil companies it was agreed to extend the present contract with the union till May 12 with the hope that difficulties could be ironed out before that time. The petroleum truck drivers union contract with the oil companies expired officially at midnight April 30.

Official statements from oil company representatives who are carrying on negotiations indicate that the meetings between the two factions are progressing "satisfactorily." One rumor insists, however, that the drivers held a meeting May 3 and voted 20 to 1 in favor of an immediate strike, regardless of negotiation proceedings. If such is the case, the drivers' strike might come unannounced and before May 12, the temporary negotiation deadline.

The gasoline station operators union, which has dipped deeply into the membership of the Master Gasoline Operators Association for support in its present negotiation with the oil companies here, is reported to be still in meeting with oil company representatives in an effort to reach a satisfactory agreement before the station operators union contract expires May 16.

It is understood, however, that two major oil companies are refusing to meet with union officials or representatives, and another major company is agreeing to meet them in private only.

Demonstration at Capitol is Futile Against Iowa Chain Tax Law

By E. L. Barringer
N. P. N. Staff Writer

DES MOINES, May 2

IOWA'S chain store tax law was subjected to a last minute demonstration by oil company employes. However, the legislature voted down an amendment to exempt service stations and, barring legal action, the law becomes effective July 1.

Included in the chain store tax law is a chain store gross receipts tax, which starts with a minimum rate of $25 on combined gross receipts not in excess of $50,000 annually, and runs up to $476,000 on gross receipts of $9,000,000 annually. The first annual tax payments under this part of the law are due Aug. 1, 1936.

Rates in the chain store tax begin at $5 for each store in a chain of 5 to 10, and reach a maximum of $155 for each store over 50 in a chain.

Co-operative associations organized under Iowa law and not for profit are exempt from both taxes. Seven classes of retailers and farmers are exempt also.

The demonstration on May 1, after the governor had signed the bill, brought over 6000 oil company employes to Des Moines, wearing "Save My Job" badges and carrying placards condemning the tax, to parade through the capitol.

Both houses voted down a proposal to suspend the rules and permit consideration of an amendment to the law exempting service stations. Suspension of the rules, requiring a two-thirds majority, was required, as clocks have been stopped and it is still April 23, the final legislative day, in the capitol. The second and third reading of any bill on the same day is prevented by rules of both houses, so suspension was necessary.

Oil company employes poured into Des Moines for the demonstration in special trains and automobiles. The crowd was orderly, and was the biggest to have ever assembled in the capitol. Available space in senate and house galleries was filled while the suspension of rules vote was taken, and the others in the crowd milled around in the corridors.

The vote in the house was 65 for suspension of the rules and 40 against, with three absent or not voting, with 72 votes required for passage. In the senate the vote was, for suspension 24, against 25, not voting or absent 1, with 34 votes required for passage.

Chain Store Tax Rate In New Iowa Law

$5 each, 5 to 10 stores.
$15 each, 10 to 20 stores.
$35 each, 20 to 30 stores.
$65 each, 30 to 40 stores.
$105 each, 40 to 50 stores
$155 each store over 50.

CHARLES PUTNAM, representative from Council Bluffs, and an oil jobber, championed exemption of service stations in the house. Don Burington, representative from Woodbury county, and co-author of the bill, spoke against suspension, charging that the chain store tax will force oil companies to limit themselves to wholesaling and place service stations under independent control.

C. L. McKinnon, representative from Henry county, spoke also against suspension, charging that the legislature is endeavoring to keep the independent man in business and that the people of Iowa are not in favor of exempting the biggest monopoly in the state.

The battle over the chain store bill has been long and bitter. Opponents to exemption of service stations have hopes that the tax will improve marketing conditions through forcing major companies to break up their marketing organization, thus achieving the result of making each outlet stand on its own feet financially.

A rumor has been current, also, that a subsidiary of a Standard Oil company is coming into Iowa, and opponents of exemption hoped to forestall further major company competition through a chain store tax.

The chain store tax bill was sponsored by the retail druggist and grocers' associations. After the bill was introduced a meeting of independent oil marketers was called to discuss the proposed tax. About 100 oil men attended the opening of the meeting, but a considerably smaller number was present later in the day when a vote to favor inclusion of the oil industry in the bill was taken and carried about 2 to 1.

A small group of marketers as individuals, actively supported the bill.

The proposal to suspend rules for a vote on exemption of service stations was defeated by efforts of the retail druggists and grocers. The amendment that was to be proposed was:

"Persons engaged in business in which 90 per cent of the revenue derived from said business is from the sale or distribution of petroleum products are exempt."

The law as drawn is believed to include bulk plants making deliveries direct to consumers, such as the farm trade. However, bulk plants selling products for resale to consumers are believed to be exempt, such as bulk plants selling products to a truck driver who in turn resells as an individual retail sales outlet.

Service stations operated by dealers, although selling the same brands, are believed to be exempt from the tax if they are not operated under the same general management, supervision, control or ownership. Lease and agency, and lease and ownership outlets selling under a common brand, according to the law, will be deemed chain outlets unless lack of control,

supervision, ownership, or management is shown.

There is some question about the status of a co-operative association, paying 7 per cent dividends on stock and/or patronage dividends at the end of the year. Under the chain tax law, co-operative associations not organized for profit are exempt.

The gross receipts tax provisions in the law do not apply to individual businesses, only to chain systems.

Chain stores are defined thus; " 'Conducting a business by a system of chain stores,' when used in this act, shall be construed to mean and include every person, as defined in this act, in the business of owning, operating or maintaining, directly, under the same general management, supervision, control or ownership in this state, and/or in this state and any other state, two (2) or more stores, where goods, wares, articles, commodities, or merchandise of any kind whatsoever are sold or offered for sale at retail and where the person operating such store or stores receives the retail profit from the commodities sold therein.

" . . . . Not more than one (1) of said stores need be located in this state, if one (1) or more of said stores or said persons is located in any other state . . . . .

"Lease and agency, and lease and ownership agreements or contracts, or operation under a common name shall, unless shown to the contrary, be deemed to constitute operation under the same general management, supervision or ownership."

Exemptions, for the chain store and gross receipts tax, in addition to co-operative associations not organized for profit are persons exclusively engaged in gardening or farming selling their own produce in this state, and the retail business of coal, ice, lumber, grain, feed, building materials, and the liquor stores established and operated by the state liquor control commission.

The taxable year begins July 1 and ends June 30. The chain store tax is payable as of July 1 of each taxable year. The gross receipts tax is payable Aug. 1 after the taxable year, or within 30 days after anyone liable for the tax ceases business.

The Iowa state board of assessment and review is to administer the law and issue regulations for its enforcement. The law appropriated $25,000 for the taxable year of 1935-36 to administer the act, and thereafter 3 per cent of the taxes collected.

The law provides, also, that it will be unlawful to shift or attempt to shift the taxes onto the "buying public or to anyone else."

Crude Cut not Necessary Says Survey Committee

(By Teletype)

WASHINGTON, May 7.—Replying to a request of the Petroleum Administrative Board, Chairman Paul Blazer telegraphed the board April 23 that the "informal opinion" of his Petroleum Code Survey Committee was that there is now no need for a cut in crude oil prices. So stated a press statement issued today by the board. However, this conclusion, Chairman Blazer emphasized, was based on the anticipation that small additional advances will be made in both tank car and retail gasoline prices.

The majority of the committee, Blazer stated, believes that at least another 0.25-cent advance in tank car prices is essential and that, if such an advance should not occur in the near future, a reduction of approximately 5 cents per barrel should be made in crude oil prices.

"The committee is also of the opinion, Mr. Blazer stated, that the final answer to the question as to maintenance of a parity between gasoline and crude oil prices, after it has been reached, will be determined by the effectiveness of efforts to balance crude oil supply and demand," the petroleum board's statement added:

"Mr. Blazer also expresses the committee's belief that the fundamental conditions in the industry have been sufficiently improved to bring about and maintain prices for finished products which will justify $1 crude oil."

In March, the Blazer committee, among other things, had recommended that, if gasoline prices did not advance within 30 days to an 18.5 parity with crude oil prices, that crude should be cut to bring about such parity.

The Mid-Continent tank car market for regular-grade gasoline (63-70 octane) has advanced from 4.75 cents to 5.25 cents since the Blazer Committee report was first made public late in March. At approximately 5.3 cents per gallon, the gasoline market would reach the recommended 18.5 parity with crude oil.

Wis. Hearing Postponed

OSHKOSH, May 7.—Hearing of the Wisconsin Markets Department on charges of unfair competition against the Oshkosh Shipping Association, scheduled for May 7 at Oshkosh has been postponed until May 14.

The first hearing on this case was held in Oshkosh April 26, but it was continued at the conclusion of one day's testimony.

California House Passes Chain Store Tax Bill

LOS ANGELES, May 3. — By a vote of 68 to 8, the California Assembly on May 2 passed the Cronin chain-store bill, which proposes to place a tax of $500 on the tenth and all additional stores operated by a multiple-unit business.

The tax would start at $1 for the first store and would be doubled for each succeeding store up to the ninth, which would pay $256. The bill would apply to service stations, automobile agencies and automobile accessory stores, as well as to other types of multiple-unit businesses.

As passed, it would not apply to stores operating under a voluntary chain system, nor to farmer and similar co-operative organizations. It is not considered probable that the measure will be enacted at the present session of the legislature as the state senate will adjourn in two weeks.

Federal Judges Uphold State's Right To Bar "Hot" Oil Movement

TULSA, May 4

AN IMPORTANT issue relating to production control in East Texas was disposed of by a three-judge federal court the past week when, in a strong opinion unmistakable in meaning, the Railroad Commission's authority to bar from shipment illegally produced oil or products thereof was affirmed.

The opinion, written by Judge J. C. Hutcheson, Jr., U. S. Circuit Court of Appeals, was concurred in by District Judges West and McMillan.

No limitation is placed upon the authority of the commission to grant or withhold permission to move petroleum in the administration of its orders to prevent waste. In fact, the court's opinion goes much farther than any previous declaration of a judicial body. The commission is held to have authority to bar from interstate commerce petroleum which it finds to have been produced in excess of its allotments to the field.

The cases before the court were the Hercules Oil Co., Melton Brokerage Co. and George C. Peterson Co., and the issues were alike. The complainants brought their suit against the Railroad Commission and asserted that they had contracted to purchase from McMurrey Refining Co. certain products, prior to Dec. 10, 1934, this being the date of the commission's order requiring shippers of petroleum to demonstrate to the commission that the material offered, or tendered, for shipment was made from legally produced crude and, when to be shipped or transported by pipeline in the form of crude, had not been produced in excess of commission allowables.

The decision, in effect, wipes out that critical date, Dec. 10. In several other cases both state and federal courts had granted clearance on products accumulated prior to that date, holding that the order could not be made retroactive.

The amount of products involved in these suits was 415,900 barrels, of which 126,415 barrels were gasoline.

Said the court, in part:

". . . . we do not find it necessary to determine the precise limits within which the state may act to prohibit movements in interstate commerce, or the precise limits within which the Railroad Commission may be confined in making regulations to carry out the statutory purposes to abate the nuisance of illegally producing oil.

"WE THINK it may not be doubted that the state has the right to prohibit the production of oil to prevent waste, because such production is in the nature of a public nuisance, and that it may make and authorize all reasonable regulations to bring about the abatement of this nuisance, extending to preventing movement in commerce of illegally produced oil and its products.

"We think it perfectly reasonable for the state, as a part of a preventive plan, to thoroughly abate the nuisance, to forbid the transportation, either interstate or intrastate, of oil illegally produced, and that a prohibition against the movement of such oil and its products in commerce is unquestionably valid . . . The federal cases supporting the right to close as nuisances, places where illegal liquor is sold, are ample authority for the act of the legislature prohibiting the transportation or handling of illegally produced oil, or its products, and the prohibition against the illegal production of oil has been in force for some time.

"As to the products in question, it cannot be claimed that the statutes have retroactive operation. It is most clear that they are the products of illegally produced oil. As to such products, at least in the absence of clear proof of ownership acquired in them for value and with real bona fides, there is no violation of constitutional law in prohibiting their movement.

"The evidence leaves no room for doubt that their contract did not vest any right in either Peterson or Hercules to move this oil. Their rights under their contracts vested only if and when the oil could be moved. Under these circumstances they stand in McMurrey's shoes. Under these circumstances they stand as he would stand if, coming into a court of equity, he asked an injunction to prevent the state from interfering with his further handling of illegally produced oil. If he did come, we think the short answer to his claim would be that no case for equity was shown. Courts of equity do not issue their writs to aid law violators, to assist them in evading valid laws. Especially will federal equity courts not make their writs available to such suitors against state laws."

Unsettled as yet is the federal question raised in the Hercules and Peterson cases, that of constitutionality of the Connally Act, under which the federal tender board was created. That question was severed by the three-judge court on jurisdictional grounds and remanded to District Judge Duval West who has yet to announce his decision. Appeal will be taken from the opinion of the three-judge court and, whichever way Judge West decides the other case, appeal will also be taken by the losing side.

Aside from this decision, East Texas pursued a routine course over the week. On April 30, eighteen refineries were operating, which figure was lower than that which had prevailed over several days previously. The state has been unable as yet to cure the practice of operating refineries on crude moved without approved tenders, although several have been closed by injunction. Oil company observers estimate that excess production currently is from 25,000 to 30,000 barrels daily.

Shell Oil Wins Appeal In Royalty Suit

LOS ANGELES, May 3.—California Supreme Court, April 26, reversed the judgment of the trial court which had ordered Shell Oil Co. to pay Alamitos Land Co. $514,228.47 for alleged fraudulent accounting for royalty oil produced from the Alamitos lease at Signal Hill.

In a decision rendered Feb. 27, 1932, the lower court found that Shell had failed to comply with the terms of the lease in accounting for oil and gas produced to the value of approximately $12,000,000 over a 10-year period. This decision was reversed by the Supreme Court on the ground that Shell's accounting method was in accordance with the terms of the lease and with "custom" or "trade usage" in the Signal Hill field.

Industry Aided By Committee "J"

TULSA, May 1.—A complete reversal of policy with reference to natural gasoline has been noted among several integrated companies the past few months, William F. Lowe, secretary of the Natural Gasoline Association of America, reported to members at the convention here today.

Mr. Lowe was making a progress report, as vice-chairman of the Natural Gasoline Sub-committee of the P. & C. Committee, otherwise known as Committee "J".

After outlining the preliminary work and plans following the formation of the committee a year ago, Mr. Lowe said in part:

"Another point in our permanent plan was a request for more co-operation on the part of integrated companies. It did not seem fair to us for integrated companies to dump their natural gasoline on the open market in the season when their own refining departments did not happen to want it.

"We did not object so much to this practice from the standpoint of the competition involved . . . however, we did object to being called a nuisance because our product adversely affected the refinery market at certain seasons of the year, when we had been helped to that title by the dumped natural gasoline of the integrated companies. We thought these companies should use all their own, or the equivalent of their own natural gasoline production, thus cutting down the volume of 'loose' natural on the open market, and reducing its bearish influence during the season of greatest consumption.

"In the case of several large companies, a complete reversal of policy has been noted the last few months. Some of these companies have actually become buyers during the season when they formerly were on the other side of the market. There is every reason to believe that the work and recommendations of Committee 'J' have been definite factors in this change of policy."

Mr. Lowe said suggestions had been made to adopt standard price differentials for the various grades of natural gasoline. "Unquestionably, there is merit in the suggestion," he reported, "but the difficulties are such that the immediate outlook for the completion of this type of price scale is not particularly bright."

J. W. Cowles, Shell Petroleum Corp., reported the Gas Contract Committee had no changes to recommend at this time.

Oil City Chemists to Meet

OIL CITY, Pa., May 7.—The Oil City group of the National Petroleum Association, department of standards and tests, will meet at the Y.M.C.A. here May 9 to hear papers on distillation by the mercury process and on the Indiana oxidation test.

I. L. Klein, of the Continental Refining Co., Oil City, will present the paper on distillation by the mercury process, and Dr. Williams, of the Quaker State Oil Refining Corp., Emlenton, will discuss the Indiana oxidation test.

U. S. Crude Stocks Rise 526,000 Barrels

WASHINGTON, May 4.—Crude oil stocks totaled 324,899,000 barrels on April 27, an increase of 526,000 barrels from the previous week, according to a report today by Administrator Ickes. Stocks a year ago were 340,718,000 barrels.

Grade of Crude	Apr. 20	Apr. 27	Chg. from Apr. 20 (Thousands of Barrels)
Pennsylvania grade	4,578	4,664	+ 86
Other Appalachian	928	936	+ 8
Lima-N. E. Ind.-Mich.	1,248	1,239	— 9
Ill.-S. W. Ind.	11,569	11,594	+ 25
N. La. and Ark.	10,061	10,162	+101
W. Tex. and S. E. N. Mex.	31,342	31,477	+135
East Texas	31,302	31,348	+ 46
Other Mid-Continent	147,877	148,457	+580
Gulf Coast	20,774	21,013	+239
Rocky Mountain	27,613	27,661	+ 48
California	33,285	32,640	—645
Domestic crude	320,577	321,191	+614
Foreign crude	3,796	3,708	— 88
Total	324,373	324,899	+526

British to Send Engines For Gasoline Study

NEW YORK, April 25.—D. R. Pye, director of scientific research for the British Air Ministry is visiting in America in the interest of the co-operative study on aviation fuels now in progress among British, Canadian and American interests. The study is under the direction of the Aviation Gasoline Detonation Subcommittee of the Co-operative Fuel Research Steering Committee.

The Canadian Bureau of Standards will report on its work during the summer meeting of the Society of Automotive Engineers at White Sulphur Springs, in June. The British interests have decided to supply the Canadian organization with full scale aviation engines for the investigation. Their use by American investigators was chiefly responsible for this decision.

The British scientist is reported to have been strongly impressed by the closeness of American technical leaders to the details of this very important investigation, and by the intimate knowledge they have of the problems which develop as the investigation continues.

Thomas Bill Amendment Gives Ickes Increased Power

By A. M. Petty
N. P. N. Washington Bureau

WASHINGTON, May 3

SECRETARY Ickes' powers under the Thomas Oil Bill were further increased by a last-minute amendment, it was disclosed today as the measure was favorably reported to the Senate by the mines and mining committee.

As originally introduced by Senator Thomas, Okla., administration of this "quotas in commerce" bill was vested in a "Federal Petroleum Board" which was independent of the Interior Department although the Secretary of Interior was a member and ex officio chairman. Three of the board's five members, appointed by the President, were required to be selected from nominations by the industry.

Amendments in committee, announced May 2, eliminated this type of board. A five-man board in the Interior Department was substituted. While "under the general supervision of the Secretary of Interior," that official would not be a member.

A new amendment appearing in the bill as reported requires that the board's actions must be "specifically approved by the Secretary of Interior."

This gives Secretary Ickes the full powers he requested at the April 16 hearings. Two other amendments proposed by Ickes at that time were also adopted, namely, provisions for regulating new pool development and for direct federal production control.

The federal board is authorized to approve voluntary agreements for orderly development of new pools executed by a majority of the operators. Issuance of "cease and desist" orders against any drilling operations which threaten to defeat the purposes of such agreements, is also authorized.

In the face of declarations by some supporters of the bill that direct federal control of crude production was unconstitutional, the committee added the following provision:

"In any State or area in which there is no authority under State law authorized to regulate or determine the amount of production of crude petroleum, it shall be unlawful and a violation of this Act to produce crude petroleum in excess of any quota prescribed under Section 9 of this Act."

However, Ickes wanted more than this. He sought authority to go into a state and control production down to the individual well when and if state control failed.

SUPPORTERS of the bill had hoped to avoid the specter of unconstitutionality by relying on "quotas in commerce." This plan proposes to set definitely the amount of oil that could lawfully enter commerce from a state, property or well. These provisions, which are still in the bill, would be invoked only when a state exceeded the demand for its oil estimated by the federal board.

The section authorizing the board to determine consumptive demand and apportion quotas to the various producing states has been greatly enlarged. Consideration may be given to seasonal variations and necessary fluctuations in stocks.

But a new and puzzling provision has been added. It reads:

"The board shall not be authorized to fix prices at which petroleum or petroleum products thereof shall be sold, nor to make any determination or recommendation which will unreasonably increase or decrease prices; but in estimating demand it shall do so with reference to reasonable prices only, and the necessity thereof over the maximum possible period."

The last clause seemingly makes maintenance of "reasonable prices" an important factor in the ascertainment and apportionment of demand.

Strings attached to the approval given the Dallas interstate oil compact may make it less acceptable to some of its advocates.

The federal board is given supervision over the compact with authority to recommend its cancellation if the states are found limiting production to market or consumer demand or restricting production so as to affect prices or "perpetuate monopoly in the production of oil and gas."

The bill, as amended, received the unanimous vote of the mines and mining committee, according to Chairman Logan, although members reserved the right to criticize and even vote against it when it comes up in the Senate.

Senator Logan made it clear that it is up to Senator Thomas, Okla., and its backers to push the bill through the Senate. He said that most of the members knew little about oil and for that reason preferred to let the Senate at large pass on merits of the bill.

This lack of interest in the bill has caused some senatorial opponents to fear that the measure may slip through the Senate.

The Administration's strategy, according to some talk around the Capitol, may be to press the bill through the Senate, then let it remain on the House calendar unacted upon until next session. Because this is the first session of the 74th Congress, bills not acted upon will carry over. If passed now by the Senate, the Thomas Bill would need only approval of the House at the next session.

Supporters of the bill admit that it will be difficult to get a favorable report out of the House interstate commerce committee, of which Congressman Rayburn, Texas, is chairman.

New Record for Gasoline Consumption in March

(By Teletype)

WASHINGTON, May 5.—Domestic demand for motor fuel in March totaled 31,997,000 barrels, an increase of 4.8 per cent over March, 1934, the Bureau of Mines reported today. This was the highest figure for any March on record, it was pointed out. Daily gasoline exports averaged 84,000 barrels in March, or nearly double the February figure. Motor fuel production was reported at a total of 36,528,000 barrels for the month. Gasoline stocks March 31 totaled 66,290,000 barrels, of which 60,405,000 barrels was finished gasoline.

Crude oil production averaged 2,628,600 barrels daily in March, the bureau reported, which was 30,000 barrels higher than in February and 200,000 barrels over March a year ago.

2 Concerns to Barge Texas Gasoline to Pittsburgh

PITTSBURGH, May 7.—The Republic Oil Co. has just announced its plans to take over the Shell station outlets in this territory on June 1, a step which will give Republic a total of 875 outlets in Pennsylvania, Virginia, West Virginia, and Maryland.

Storage facilities have already been established at Coraopolis, Pa., where a capacity of 5,000,000 gallons is available in the refinery which Republic recently purchased from the Waverly Oil Works Co. Gasoline is to be shipped by water from the company's refinery at Texas City, Texas, the initial cargo of 500,000 gallons having arrived this week at Coraopolis. It is estimated that 20,000,000 gallons will be brought up annually.

Republic expects to spend considerable money in modernizing the storage facilities at Coraopolis. The company's plans for marketing its products are to be revealed later this month.

This is the second oil company within two weeks to announce expansion plans in the Pittsburgh area. American Oil Co. recently made arrangements for water terminal facilities at Hays and plans have been made for a fleet of barges to transport petroleum products from its new refinery, also at Texas City, to the Pittsburgh district. A steamer will be used which will tow seven or eight loaded gasoline barges with a pay-load capacity of over 2,500,000 gallons of gasoline. This is part of a transportation program which American states will involve the expenditure of $1,000,000.

Re-advertise Gasoline Bids in Region Six

WASHINGTON, May 7.—The Treasury Procurement Division has decided to re-advertise for bids to supply the gasoline requirements of federal agencies in Region 6, for the July-September quarter, it was learned today. Opening of bids will probably be May 27. This action was taken because only three bids were received at the opening May 2.

Approximately 12 bids to supply federal needs in the Rocky Mountain states, Region 5, were received at the opening May 6. Maximum prices of major oil company bidders were based as follows: Standard of Indiana, The Texas Co., Continental Oil and Sinclair Refining, tank wagon less 1 cent on third grade and 2 cents on regular or premium grades; Socony-Vacuum 25 per cent above tank wagon before addition of the federal tax.

Natural Gasoline Production

WASHINGTON, May 4.—Daily average natural gasoline production in March was 4,367,000 gallons compared with 4,427,000 gallons in February, according to a report today by Bureau of Mines. Stocks on March 31 were 220,567,000 gallons, an increase of about 20,000,000 gallons over March 1. Most of increase occurred at plants and terminals.

Contracts Lost When Bids Violate the Oil Code

(By Teletype)

WASHINGTON, May 7.—Eight government contracts in the District of Columbia have been cancelled because the bids of oil companies upon which the business was let were found to violate the oil code, it was learned today.

The local code committee follows government bidding closely. Where a bid appears to violate the code, the committee cites it to the oil administration. If the complaint is supported, the government agency is asked to cancel the contract.

How extensively this method of securing code compliance is being used throughout the country is not known here. Government contracts require the bidder to certify that he is complying with the code. So far, however, only code violations in the bid itself have formed the basis of cancellations in the District of Columbia.

Stabilization Program To Have Ickes' o. k.

WASHINGTON, May 7.—The oil administration has taken steps to bring the activities to the industry's stabilization committees under closer supervision, it was learned today. There must be a representative of the oil administration present at all committee meetings, agreements arrived at must be submitted for the formal approval of Administrator Ickes and all elements in the industry which are affected by such agreements must be given an opportunity to be heard by the committees. This action follows complaints against the work carried on by some of the stabilization committees.

William H. Dodd Dies

TULSA.—Word was received here of the death of William H. Dodd, former Tulsa geologist, at his home in San Luis Obispo, Calif. He formerly was associated with the J. A. Hull Oil Co.

New Texas Gas Law May Halve Natural Gasoline Output in Panhandle

By Lawrence E. Smith
N. P. N. Staff Writer

TULSA, May 4

WEEKS of discussion, hearings, conferences between gas and oil men and legislators finally resulted in the passage of a gas conservation law in Texas designed to end the huge waste in the Panhandle district. The bill was signed May 2 by Gov. James V. Allred.

Two kinds of gas are being wasted in the Panhandle, "sweet" and "sour." The new law provides that wastage of sweet gas must be ended not later than Aug. 1, 1935; sooner if the Texas Railroad Commission promulgates the necessary rules, regulations and orders. The sour gas now being stripped of its meager gasoline content may continue to be blown into the air until Oct. 1, 1935.

It is believed that the commission will hold a hearing late in May to take testimony on which to base an order. The wastage of sweet gas, therefore, should be ended in June. Some authorities estimate that the present production of 800,000 to 900,000 gallons of natural gasoline daily in the Panhandle will be cut in half.

The new law, which of course operates statewide, defines a gas well as follows:

"The term 'gas well' is any well (a) which produces dry natural gas only or (b) which produces more than 100,000 cubic feet of natural gas to each barrel of crude petroleum oil from the same producing horizon, or (c) which produces natural gas from a formation or producing horizon productive of gas only encountered in a well bore through which crude petroleum oil also is produced through the inside of another string of casing."

Other definitions in the law are:

"The term 'oil well' is any well which produces one barrel or more of crude petroleum oil to each 100,000 cubic feet of natural gas.

" 'Dry gas' is any natural gas produced from a stratum that does not produce crude petroleum oil.

"The term 'sour gas' shall mean any natural gas containing more than one grain of hydrogen sulfide per one hundred (100) cubic feet or more than thirty (30) grains of total sulfur per one hundred (100) cubic feet, or gas which in its natural state is found by the Commission to be unfit for use in generating light or fuel for domestic purposes.

"The term 'sweet gas' shall mean all natural gas except 'sour gas' and 'casinghead gas.'

"The term 'casinghead gas' shall mean any gas and/or vapor indigenous to an oil stratum and produced from such stratum with oil."

The statute recites the familiar definitions of waste, declaring a prohibition thereof, which are likewise found in the new conservation law of the state pertaining to oil, but adds these definitions which are the basic principles of the gas waste statute:

"The term 'waste' among other things shall specifically include:

" . . . . . (h) The production of natural gas in excess of transportation or market facilities or reasonable market demand.

"(i) The use of natural gas for the manufacture of carbon black without first having extracted the natural gasoline content from such gas.

"(j) The use of sweet gas produced from a gas well for the manufacture of carbon black.

"(k) Permitting any natural gas produced from a gas well to escape into the air before or after such gas has been processed for its gasoline content.

"(l) The production of natural gas from a well producing oil, from a stratum other than that in which the oil is found, unless such gas is produced in a separate string of casing from that in which the oil is produced.

"(m) The production of more than 100,000 cubic feet of gas to each barrel of crude petroleum oil unless such gas is put to one or more of the uses authorized for the type of such gas so produced under allocations made by the Commission."

Prohibition of use of sweet gas for carbon black manufacture will bring about certain rearrangements in that industry. There are 13 companies in the state operating 26 plants. The state report for 1934 credited these companies with total daily consumption of gas of 453,774,000 feet. Casinghead gas, either sweet or sour, may be used in carbon black plants.

The new law declares that sweet gas may be utilized for light and fuel; efficient chemical manufacturing (except car-

Billion Feet Wasted

TULSA, May 4.—More than a billion feet of natural gas popped into the air daily in the Panhandle district during February, while approximately 890,000 gallons of natural gasoline were produced, according to the Texas Railroad Commission's gasoline plant-natural gas summary for that month.

The summary shows that the plants in the Panhandle district were connected to a potential of 11,711,372,000 cubic feet of gas daily, although the total plant capacity was listed at only 2,657,500,000 feet a day. The plants took an average of 2,063,583,000 feet of gas daily, but had an extraction loss of 89,846,000 feet.

With 159,915,000 feet used daily at the plant and on the leases, 460,011,000 feet turned to carbon black plants, and 327,720,000 feet turned to light and fuel systems, the remainder, 1,026,091,000 feet of gas daily, was "vented to atmosphere."

bon black); bona fide introduction into oil or gas bearing horizon to maintain or increase the rock pressure or otherwise increase ultimate recovery of oil or gas; extraction of natural gasoline when residue is returned to horizon from which it is produced.

Sour gas may be burned in carbon black plants provided it is so burned as to produce not less than one pound of black to each thousand feet and provided that the gasoline is extracted before the gas is burned.

The law commands all operators of gas wells in the state to ascertain the open flow and rock pressure of each gas well to be operated, on or before the first days of January and July each year. Reports of these tests are to be filed by the 10th of each of those months and the records are to be open to public inspection.

Back in 1932 the Railroad Commission attempted to deal with the Panhandle problem by requiring ratable purchases of gas by the pipeline companies. The state was quickly enjoined by federal court from enforcement of such an order. The new law carefully skirts this pitfall by imposing the ratability upon the production of gas and not upon its purchase. The Railroad Commission is to ascertain the market demand for gas and apportion the existing market to the producers, similar to the way it handles oil proration. The producer, given an allowable of gas to produce, will make his own arrangements for market; the state will not attempt to see that he makes a sale.

The commission's function in this respect is declared to be as follows:

"Sec. 10. It shall be the duty of the Commission to prorate and regulate the daily gas well production from each common reservoir in the manner and method herein set forth. The Commission shall prorate and regulate such production for the protection of public and private interests:

"(a) In the prevention of waste as 'waste' is defined herein;

"(b) In the adjustment of correlative rights and opportunities of each owner of gas in a common reservoir to produce and use or sell such gas as permitted in this Article."

It is provided that the Commission will hold a hearing on or before the 20th of each month to establish the allowable gas production from each common reservoir of gas. In determining the allowable for each well the factors to be considered include the "size of the tract, segregated with respect to the surface position and common ownership of gas, upon which each gas well or wells are located; the relation between the daily producing capacity of each gas well and the aggregate daily capacity of all gas wells in such common reservoir; and all other factors, if any, which bear a reasonable relation to the purpose of the Commission in making such determination; provided that in no event shall any gas well be deemed to be located upon a tract exceeding in areal extent the drainage area of such well as determined by the Commission.

"THE drainage area of a well is the area from which the underlying recoverable gas will, in due course, be produced through such well producing at the lawful rate. In ascertaining the drainage area of a well, the commission shall take into account such factors as are reflected in the productive capacity of a gas well, including formation pressure, the lineal extent of such formation open in the well bore, the permeability and porosity of the producing formation, and the well bore's structural position, together with all other factors taken into account by a reasonable operator in determining the drainage area for a gas well."

Limitations on the extent of proration: No gas well with daily natural open flow of 200,000 feet or more is to be restricted to less than 50,000 feet daily. No well with open flow of less than 200,000 feet daily is to be limited to less than 25 per cent of its open flow. In each common reservoir producing sweet gas or sour gas only, no well is to produce more than 25 per cent of its natural open flow. However, the Commission has authority to increase the percentage if required to prevent waste. In pools producing both sour and sweet gas, production is not to exceed 25 per cent of open flow but the Commission may restrict to as low as 15 per cent if necessary to prevent waste due to intermingling of sour and sweet gas.

The Commission is authorized to establish zones in common reservoirs. This is certain to be a necessity in the Panhandle, where areas drained by wells vary in size according to size of leases. In Gray county, for example, there are gas wells located on 40- and 80-acre tracts; the size of these tracts will have to be considered as drainage areas. In other sections of the Panhandle gas companies own extensive tracts and one well may be draining 640 acres or more. To fix the drainage area per well for the whole field as the size of the smallest lease would bring on an unnecessary drilling campaign.

In Sec. 21 of the law, provision is made for pooling acreage for common development and operation. Thus, sanction is given to a practice that might otherwise be held to be in violation of certain anti-trust statutes of the state.

Revive A. P. I. Chapter

TULSA.—Revival of the long-dormant American Petroleum Institute's Tulsa chapter, production, has been effected with J. R. McWilliams, Carter Oil Co., as chairman. H. M. Cosgrove, executive secretary of the Tulsa Purchasing Agents Association, was elected first vice-chairman, and B. P. Sibole, vice-president of the Stanolind Pipe Line Co., second vice-chairman.

Heads Tulsa Society

TULSA, May 4.—G. S. Dille, of the Texas Co.'s Kansas-Oklahoma-Kentucky division, is the new president of the Tulsa Stratigraphic Society, succeeding R. M. Whiteside of the Shell Petroleum Corp.

J. A. Borden, Pure Oil Co., is the new vice-president. Ed. Minnis, Tide Water Oil Co., is the new secretary-treasurer.

Gasoline Mileage and Maximum Power Are Increased by Volatile Fuels

The following article has been compiled from the notes taken on the more or less extemporaneous preliminary report made at the Fourteenth Annual Convention of the Natural Gasoline Association of America by Dr. G. G. Brown on the research project being conducted under his direction at the University of Michigan for that organization. Dr. Brown indicated that, though many of his findings had not been completely checked for their mathematical accuracy, the general conclusions were substantially correct.

THE present investigation being conducted for the Natural Gasoline Association of America is to determine the advantages in the use of fuels of high volatility in motors designed to make the best possible use of such fuels, and to determine what changes if any are necessary in the engines themselves in order to obtain full benefit of the high volatility fuels.

After a careful preliminary survey it was decided that the 1934 Master Chevrolet appeared to be the most suitable motor for conducting this investigation. There are a large number of such cars on the road and it represents a modern design of fuel plant which can be readily modified to remove the exhaust heat from the intake manifold.

In making acceleration tests the standard speedometer with which the car is equipped is not sufficiently accurate to obtain satisfactory results, and the fifth wheel drive, an electric tachometer, was used. All tests were conducted on a level stretch of highway along a straight measured mile.

Each test consisted of two parts, one run in each direction. This precaution was taken for the purpose of eliminating the effect of wind and any irregularities in the road. The wind velocity and the atmospheric temperature were measured by means of a wind gage and a thermometer mounted on a post set midway of the mile course and readings taken at regular intervals during the tests.

In addition to mileage at constant speed, and acceleration starting at intervals from 5 to 35 miles per hour, the top speed was also determined as a measure of the maximum power developed by the motor. This maximum speed was obtained by driving the car at full throttle and timing the run over the measured mile by means of the stop watches.

The fuels used in the tests conducted so far are three in number and have the following properties.

Table 1

Distillation Characteristics of Test Fuels

	Fuel No. 1	Fuel No. 2	Fuel No. 3
10% Evap.	117	137	151
50% Evap.	138	198	260
90% Evap.	201	290	382
Octane Number	65.2	63.9	63.2
°A.P.I.	78.1	66.1	65.1
Reid vapor pressure	10.15	7.15	7.05

The octane numbers as determined on the C.F.R. engine at the University just prior to the test runs were as follows: Fuel No. 1, 65.9; fuel No. 2, 65; and fuel No. 3, 65.6.

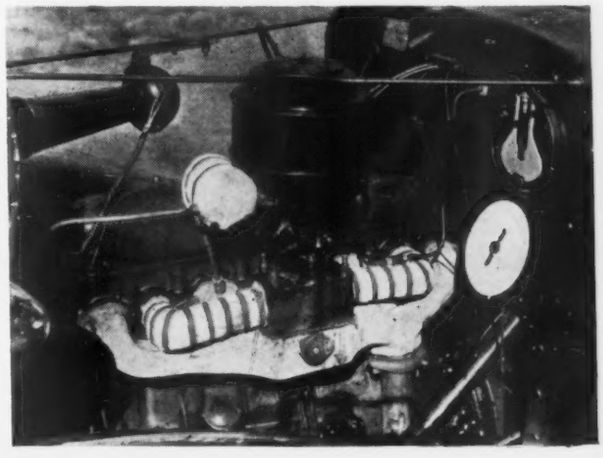
Since the octane numbers of the fuels used are substantially the same, any difference in the results obtained are due entirely to difference in the volatility characteristics of these fuels.

Although no single number is generally recognized to indicate the volatility of motor fuels, the volatility number or volatility index suggested by Oberfell and Alden is a most convenient scale for indicating motor fuel volatility and will be used in reference to these three fuels which have volatility numbers of 146, 76 and 24 for Fuels 1, 2 and 3 respectively. The volatility number is obtained by subtracting the temperature of the 50 per cent evaporated point in the A.S.T.M. distillation from 284 which is the 50 per cent point for U. S. Motor Fuel.

It is generally recognized that the use of fuels of high volatility invariably give better performance in cold weather. For this reason the car with standard equipment and adjustment exactly as delivered from the factory was tested completely under weather conditions as existing in Michigan at atmospheric temperatures at about 20F. For these tests the octane selector on the car was set for the high of incipient detonation for each of the fuels as tested.

This octane selector is essentially a spark advance adjustment which is made on the distributor at the side of the engine. It bears a scale numbered from 10 retard up through zero to 10 advance. The zero point is set at about 10° advance before top dead center and is suitable for fuels of about 65 octane number. The spark is automatically advanced by means of a centrifugal device as much as 36° with increased speed of the engine.

There is an additional control operated by the suction in



1934 Chevrolet, showing the insulated manifold used to permit the use of highly volatile fuels in the University of Michigan road tests under Dr. G. G. Brown

the manifold which retards spark timing as much as 17° as the manifold vacuum is reduced by the application of a heavier load on the engine. By means of this ingenuous control, the spark is automatically adjusted so as to obtain the best operating conditions, and it is necessarily simple to set the octane selector or manual adjustment to the point which corresponds to the octane number of the fuel being used.

In conducting these tests it was found that Fuel 3 required a setting at the zero point on the octane selector to obtain just incipient detonation when operating at full throttle at a constant speed of 26 miles per hour climbing a steep grade. Fuels 2 and 1 required about 3° retard from this zero position for the point of incipient detonation as determined in the same manner, but with all other adjustments exactly the same. Since 3° at this point of the octane selector scale is equivalent to about six octane numbers, the car used in these road tests rates Fuel 3 about six octane numbers higher than Fuels 1 and 2, although all three fuels were found to have substantially the same octane number when tested according to the current A.S.T.M. procedure.

A clearer and complete explanation for this difference cannot be given but it appears that part of this difference is due ot the fact that Fuel 3 contained 45 per cent of cracked gasoline from Gulf Coast crude while Fuels 1 and 2 were substantially all straight run material, and partly due to the poor distribution in the manifold when using Fuel 3 causing some cylinders to be supplied with over-rich mixtures and other with lean mixtures. When the standard car was tested with all standard adjustments and the octane selector set in the manner described, the results shown in Tables 2 and 3 were obtained when using Fuels 1, 2 and 3.

Table 3

Fuel Consumption at Various Speeds

Speed in Miles per Hour	(Miles per Gallon) Fuel 1	Fuel 2	Fuel 3
10	15	14	15.8
15	16.6	16.3	19
20	17.9	16.9	21
25	19	18.9	22
30	19.4	19.1	21.7
35	18.8	18.6	21
40	18	18.1	20
45	17.2	17.4	19
50	16.3	16.7	17.8
55	15.5	16	16.7
60	14.6	15	15.6
65	13.8	14	14.2
70	13	13	12.4

If we use as our standard of comparison the less volatile fuels, Fuel 3 with a volatility number of 24, and compare the acceleration obtained by substituting Fuel 2 with a volatility number of 76, we find an average gain in acceleration with exactly the same carburetor adjustment of about 52 per cent which corresponds exactly to the increase in volatility number of 52. Similarly if we compare the average acceleration obtained with Fuel 1, having a volatility number of 146 with that of Fuel 3, we find an average improvement of about 61 per cent for the corresponding increase in volatility number of 122. The corresponding gain in acceleration is obtained during the first part of the accelerating period when the speed is increased 10 miles per hour, and particularly from initial speeds of about 15 or 20 miles per hour, the average for the first period of acceleration being about 88 per cent gain for Fuel 2 with the poorest acceleration obtained from Fuel 3 we find over 125 per cent improvement in acceleration by using Fuel 2 in place of Fuel 3.

Although Fuel 2 would appear to possess sufficient volatility to give the best improvement, a noticeable further improvement is obtained by the use of Fuel 1 which shows a corresponding improvement of 160 per cent for the first accelerating period. The fact that Fuel 1 gives practically uniform and perfect acceleration from all initial speeds indicates that no further gain is to be expected by the use of fuels of any greater volatility. During the second part of the accelerating period after the car has already gained a speed of 10 miles per hour, the gains are less startling but correspond in about the same manner, being about 16 per cent for Fuel 2 and 21 per cent for Fuel 1 as compared with Fuel 3.

Clearly this car is so designed and adjusted as delivered from the factory as to obtain its best performance in cold weather only with the most volatile fuels now obtainable. This is in general agreement with the observations of all users of motor cars that best results can be obtained in cold weather only with the most volatile fuels available.

The only disadvantage to the use of such fuels on cars when adjusted according to the standard or factory adjustment, is a loss in mileage when operating at the lower speeds due to the over-rich mixture supplied by such an adjustment. If the carburetor is properly adjusted for

Table 2

Acceleration in Feet Per Second Per Second Atmospheric Temperature 20°F.

	Standard Carburetor Adjustment Intermediate Stroke on Accelerating Pump Metering Pin 65-46, Orifice .089						Long Stroke on Accelerating Pump	
	Fuel No. 1		Fuel No. 2		Fuel No. 3		Fuel No. 3	
Initial Speed in Miles Per Hour	First Speed Increment of 10 Miles per Hour	Second Speed Increment of 10 Miles per Hour	First Speed Increment of 10 Miles per Hour	Second Speed Increment of 10 Miles per Hour	First Speed Increment of 10 Miles per Hour	Second Speed Increment of 10 Miles per Hour	First Speed Increment of 10 Miles per Hour	Second Speed Increment of 10 Miles per Hour
5	3.04	2.9	2.9	2.72	1.85	2.38	2.73	2.35
10	3.1	2.94	2.93	2.79	1.5	2.29	1.66	2.14
15	3.01	2.98	2.83	2.68	1.14	2.0	1.33	2.48
20	3.04	2.91	2.78	2.8	1.2	2.53	1.38	2.63
25	3.1	2.79	2.88	2.71	1.47	2.55	1.73	2.88
30	3.02	2.64	2.86	2.57	1.85	2.42	2.17	2.47

these more volatile fuels the mileage can be greatly improved without loss in performance, so that the superior performance indicated in Table 2 may be retained by the use of the more volatile fuels with only an insignificant loss in mileage.

Incomplete tests indicate that the mileage obtainable from Fuel 1 at a speed of 20 miles per hour may be increased to at least 21.5 miles per gallon by proper adjustment of the carburetor as compared with a maximum mileage of 22 miles per gallon as obtained with Fuel 3. The infinitely better performance obtainable from Fuel 1 under these conditions more than compensates for the insignificant loss in mileage of about 2 per cent at 20 miles per hour, particularly when consideration is given to the fact that the fuel consumption at high speeds is the same for Fuels 1 and 3 under these conditions.

If the driver is concerned with mileage alone regardless of performance, it is to be expected that better mileage may be obtained with the least volatile, or heaviest fuel. The heaviest fuel contains the most pounds per gallons and therefore can deliver the greatest quantity of energy per gallon. But if equal performance is demanded, superior mileage can always be obtained from the use of the most volatile fuel.

During the warmer weather when the atmospheric temperature was approximately 60°F. another series of tests was conducted with the motor operated in the standard manner except that the carburetor was properly adjusted for the use of the more volatile fuels; and an additional series of tests was run with the heat removed from the intake manifold and with the engine cooling system modified so that the engine would run as cool as possible. These modifications were simple and included no fundamental change of any kind in the engine.

The accompanying illustration shows the changes which were made in order to decrease the mixture temperature as delivered to the cylinders. It will be observed that the intake manifold has been insulated by wrapping with asbestos and tape. The exhaust gases were shut off from the hot spot surrounding the intake manifold by blocking off the exhaust manifold by means of two thick sheets of asbestos with a sheet of metal between them.

In order to keep the cooling water as cool as possible the automatic thermostat which restricts the flow of water from the engine to the radiator was removed. When operating in this manner with the more volatile fuels, it was found that ice would collect on the throttle and in the venturi of the carburetor. In order to eliminate this difficulty the gasoline was heated to a temperature of about 105 to 110 F. by passing exhaust gases around a coil through which the gasoline flowed on its way to the carburetor. This exhaust heater is shown as the small white insulated box just below and to the left of the air filter.

IN SETTING the octane selector for these tests with the carburetor properly adjusted for the different fuels, it was found that a difference of 4° in spark advance was necessary to bring Fuels 1 and 3 to the corresponding points of incipient detonation. This would indicate an approximate different of eight octane numbers in Fuels 1 and 3 as determined by these road tests. This great difference as compared with that reported for the cold weather tests when the same carburetor adjustment was used for both fuels, is due to the fact that with proper carburetor adjustment for each fuel, each fuel is used with the mixture ratio giving the greatest tendency for detonation.

Preliminary tests to determine the temperature of the mixture as it enters the ports in the engine block indicate that the mixture temperature is approximately 100° above the atmospheric temperature at low speeds, and approximately 60 to 80° above atmospheric temperature at high speeds. When the engine was modified as shown and run without the hood, it was found that these mixture temperatures would be reduced about 50F. In the paper given before this association last year it was indicated that a decrease in the mixture temperature of 50F. would increase the power output of the motor by about 12 per cent. The results which have been obtained so far in these road tests indicate that the improvement is at least equal to that expected from these laboratory results.

By the changes in the manifolding and cooling system as described it was found that the maximum speed of the car had been increased from 77.4 miles per hour to 80 miles per hour when using the same fuel with the same carburetor adjustment, but with the spark advanced 2° further in order to take full advantage of the cool mixture and motor. This increase in top speed corresponds to an increase in maximum horsepower of from 81 horsepower at 77.4 miles per hour to 93 horsepower at 80 miles per hour or a gain in maximum horsepower at top speed of approximately 15 per cent.

A comparison between Fuel 1 and Fuel 3 at top speed with the cold manifold indicated a top speed of 80 miles per hour and a mileage of 9.6 miles per gallon when using Fuel 3, and a top speed of 80.22 miles per hour with a mileage of 10.2 miles per gallon when using Fuel 1 with all conditions the same except that the carburetor was properly adjusted for the fuel used. The top speed is practically the same but the mileage is noticeably better in the case of the more volatile fuel.

The acceleration when using fuel one which is sufficiently volatile to insure almost perfect distribution in all cases, was increased on the average about 20 per cent when using the cold manifold and low temperature cooling water as compared with the standard car. When using Fuel 3, the acceleration was about 10 per cent worse with the cold manifold than with the standard equipment due to the fact that this fuel does not possess sufficient volatility to give satisfactory distribution with the cold or hot manifold even when compensating carburetor adjustments are made. Com-

(*Continued on page* 72)

Fuel Symposium Shows Engine Efficiency Bettered by Higher Volatility

By Arch L. Foster
N. P. N. Staff Writer

TULSA, April 26

EFFORTS of automotive engineers and motor fuel technologists to improve the volatility of gasolines and the design of the automotive fuel systems which use them have resulted in most remarkable improvements in both lines, the Natural Gasoline Association of America, was told at its annual convention here this week.

A suitable volatility index should be devised, it was urged, to measure properly the variations in volatility of modern fuels. The Oberfell-Alden "Volatility Index" was mentioned as having shown a degree of satisfaction for this purpose. T. B. Rendel also presented a chart used in Shell Petroleum Corp. laboratories, which has shown good results in rating fuels. General opinion was that probably the C. F. R. Committee is the body which should undertake the development and adoption of such an index.

The performance characteristics of the fuels and of the new cars have improved to a gratifying degree, chiefly because of the work done on fuels and systems, it was stated. The average volatility of motor fuels on the east coast, and in the Mid-Continent territory has increased in the last five years, so much that, for instance on the East Coast, the least volatile fuel is appreciably more volatile than the average curve of volatility for 1930.

Many of the 1935 automotive fuel systems, show the effect of this co-operative study, in the way they handle satisfactorily much more volatile fuels. Several of the new cars have operated without vapor lock and with increased performance and miles-per-gallon, on fuels of 12 to 18 pounds Reid vapor pressure, Dr. G. G. Brown told the natural gasoline men.

The symposium on Thursday, in which automotive, refining, and natural gasoline interests were represented, occupied the entire day. Two papers were presented by refiners, two by automotive engineers, and one, by R. C. Alden, research director for Phillips Petroleum Co., which represents both the natural gasoline and refining interests. Dr. Brown presented informally a progress report on

J. A. Lupfer, newly elected president of the Natural Gasoline Supply Men's Association

the study of more volatile fuel performance in a 1934 car, as a part of the research program which he directs for the natural gasoline association.

The trend in volatility of motor fuels sold on the East Coast has been decidedly upward since in 1919, according to U. S. Bureau of Mines reports up to 1931, Dr. A. E. Becker and A. D. Bauer, Standard Oil Development Co. showed. Since 1931, the trend, while varying from year to year, has been more pronounced, especially in the last two years, these authors found by an extensive survey of fuels in that territory. Briefly, these investigators found that the greatest change in volatility has been in the 10 per cent and 20 per cent points of the A. S. T. M. distillation curve, with lesser increases at 50 and 90 per cent points. Dr. Becker's paper is printed in full elsewhere in this issue, and constitutes the first authentic and general report on this subject since the bureau stopped its semi-annual surveys in 1931.

Becker emphasized the fact that recently the greatest average volatility increase has been at the 212°F. and 284°F. points. This, he states, means that much improvement has occurred in uniformity of distribution of fuel mixtures to the engine cylinders, and therefore in engine performance. It has been long accepted that one great cause of poor engine performance has been faulty fuel distribution; if added volatility solves this problem in considerable degree, this advantage alone will repay the efforts made to promote the use of more volatile fuels.

As a companion report to the Becker-Bauer paper, R. C. Alden summarized the results of Phillips' surveys of Mid-Continent motor fuels sold during the same period. Testing more than 4000 samples of fuel in Phillips' sales territory, Alden reported an average gain of about one-half pound Reid vapor pressure. The "10 per cent point" has been lowered by about 10°F., the "50 per cent point" is down about 25°F., and the "90 per cent point" lowered by about the same proportion, he stated. Eighty per cent of all gasolines fall within about a 20°F. distillation range for any given season, he found.

Alden also showed that when third grade gasolines were adopted and placed on the market by the majority of companies, the volatility of regular grades increased abruptly. He stated that, since during this time the average vapor pressure of natural gasoline declined, and the per cent of natural gasoline in motor fuel declined also, the vapor lock troubles which appeared and increased during this period obviously could not be

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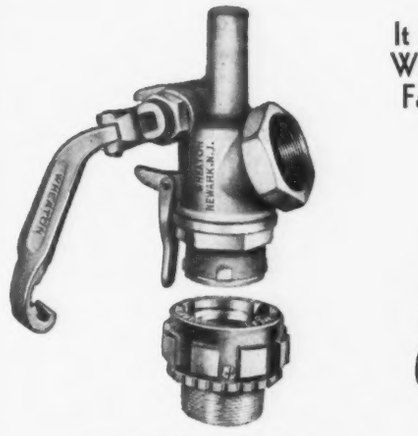

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A Petition

To the Congress of

Submitted by

The American Petroleum Institute

Adopted Unanimously by Its Board of Directors, Meeting at Chicago, May 3, 1935

THE American Petroleum Institute, with a substantial and representative membership from a $12,000,000,000 industry, which has more than 2,000,000 owners and over 1,000,000 employes, respectfully petitions Congress to pursue policies which will permit this industry to take its rightful place in the march of recovery.

The Institute asks this with full appreciation of the earnest endeavors which have been made by the federal authorities, in the past two years, to speed recovery. These efforts the petroleum industry has generously supported, recognizing that in a time of such emergency it had a patriotic obligation to co-operate in bringing about re-employment and restoring the country's purchasing power. Its annual payroll, approximating $1,569,600,000 is practically equal to the 1929 payroll and in real wages it is 7.2% higher. In fact, the per capita yearly wage paid by most of the oil companies has always ranked high in industry. In the past two years the industry reabsorbed 217,200 persons. Taxes on its properties, products and operations contribute $1,250,000,000 annually toward the maintenance of government.

The Institute believes that the people who depend upon our 24,600,000 automobiles for transportation, the farmers who cultivate the land with tractor drawn equipment, the operators of thousands of industrial plants and the many other users of petroleum products are best served when competition is free, when the operation of economic law is unhampered and when the profit incentive stimulates initiative and inspires invention. The free operation of these forces inevitably tends to insure quantity, improve quality and to reduce prices. These are the true tests of the service rendered by any industry to the public. Gasoline consumers cannot continue to enjoy these advantages if the responsibility of management is transferred from the thousands of individual companies to a federal bureau.

These advantages can be assured if the federal and state governments will remain each in its own sphere, observing the separation and limitation of powers which the Constitution has wisely ordained and the Supreme Court by many decisions and precedents has clearly defined.

Legislative uncertainties, threats of governmental control and interferences with the legitimate development of a great industry which has served the public satisfactorily are handicapping our business and retarding progress toward a constructive solution of our problem.

Out of an intimate knowledge of conditions and a long experience in serving the American people we feel qualified to offer a program of principles, which will materially assist in stabilizing conditions under which the oil industry can operate to the direct advantage of both the makers and users of petroleum products.

We respectfully submit:

FIRST: That there should be a minimum of regulation by government, state or federal, to the end that private industry may be free to serve the public most efficiently and economically.

SECOND: That the state governments, having the power to regulate production of crude oil and natural gas to prevent waste and so conserve a valuable natural resource, should be encouraged in that effort.

THIRD: That the Federal Government, having the power to deal with interstate and foreign commerce, and to authorize interstate compacts, should supplement the production control effort of the states:

By making permanent and rigidly enforcing the Connally Law (S. 1190) prohibiting the shipment in interstate and foreign commerce of oil produced in violation of state laws;

By approving the interstate compact which has already been ratified by the legislatures of five of the principal oil producing states;

By directing the U. S. Bureau of Mines, a competent fact-finding agency, to ascertain the crude oil production necessary to meet the consumptive demand of the nation and to make its findings available to the interstate compact commission and the respective conservation authorities of the oil producing states.

By exercising control of imports to a proper ratio to domestic production for such a time as is necessary.

FOURTH: That as concerns marketing, the field of greatest competition, there is no reason to single out the oil industry for special federal intervention. That industrial pacts and agreements when voluntarily made by any industry for the purpose of eliminating unfair methods of competition should be permitted.

FIFTH: That any such economic straitjacket as is contained in S. 2445 or similar proposals for the enlargement of the N.I.R.A. would serve to increase the price of gasoline and demoralize the industry.

In support of the foregoing we point to the record of the oil industry during the last fifteen years as one of outstanding public service.

But for cheap gasoline many industries which have contributed substantially to American economic progress could not have enjoyed such remarkable development. Notable among these are automobile and tire manufacture and modern road building, with the related industries such as steel, textiles, plate glass, leather and numerous accessories.

The production, transportation, refining and distribution of petroleum and its products go hand in hand with the automotive industry. Important as it is that automobiles should meet all reasonable demands upon them, it is equally important that the car owner, wherever he may travel, should have access to a plentiful supply of gasoline and oil, of good quality and at reasonable prices.

During the last fifteen years the efficiency of American made automobiles has steadily increased while their price has as steadily declined. Today, the United States makes 75% of all the automobiles in

the United States

the world. During the same period the petroleum industry has supplied the car owner with gasoline and oil in ample quantities, of constantly improved quality and at steadily decreasing prices.

In 1920 the average selling price for gasoline, exclusive of tax, in fifty cities, representing all the states, was 29.7c per gallon; in 1934 the figure for the same cities was 13.6c—a drop of 54.2%. A barrel of crude petroleum now yields about twice as many gallons of gasoline as it did fifteen years ago. No consumer of gasoline and oil can reasonably complain that he cannot readily procure a plentiful supply of each, of good quality, at reasonable prices. The average cost exclusive of tax of owning and operating a motor car today, mile for mile, is about one-fourth of what it was fifteen years ago.

The free play of economic conditions under which these two great industries have so well served the consumer has been substantially the same. In both there has always been keen, unrelenting competition; and this, in turn, has stimulated new discoveries and new methods, has led to the development of new markets and has constantly tended to improve quality and reduce prices.

Because it has grown so fast, the oil industry has constantly needed large amounts of new capital. Its investment increased from $6,350,000,000 in 1921 to $12,200,000,000 in 1932. During these twelve years $2.94 of new capital was put into the industry for every dollar that was earned, and the annual average earning of the oil industry on its investment was only 1.66%. It is inconceivable that political management could operate a fast-growing and hazardous business on so close a margin as this.

In transportation, particularly, which is such an important factor in costs, the oil industry has devised and developed its own unique systems, giving incomparably cheap movement by pipelines, ocean tankers, and by barges on inland waterways.

Every resource of science and technology has been enlisted in the search for new supplies of oil in the earth. In fact, the chief offense imputed to the industry is that it has been all too successful in finding new pools.

With such a record it is apparent that the hands of the oil industry should not be tied by governmental bureaucracy. The issue between government and private responsibility for this vast industry should not be obscured by vague declarations that the petroleum industry has become affected with a public interest justifying governmental control just because conservation has come to be recognized as a responsibility of government.

The distinguishing characteristic of petroleum and natural gas is their liquid and fugacious nature. In other mining industries the situation is entirely different; for instance, the owner of coal land is not subject to drainage, for he keeps his coal if he likes and his neighbor cannot take it. But when a well is drilled into an oil producing area the "law of capture" permits the surface owner to draw the oil from his well even though it may drain the supply of the adjoining land owner. Therefore, the neighbor must drill and produce his share of the oil or lose it; and his neighbor in turn must do likewise. This was a situation beyond the power of the industry to remedy, and in all flush pools, before the conservation efforts of the states were effective, the "law of capture" resulted in unscientific and wasteful practices and overproduction. The oil producing states and the industry itself have now come to an intelligent conception of what real conservation means. The industry believes that true conservation means the scientific control of production making for greater recovery, as well as efficient and economic utilization of crude oil.

It is the duty of the oil producing states, in the public interest as well as in the interest of the industry, to prevent waste of crude oil and thereby conserve the supply. This duty is the obligation of government and when that obligation shall have been discharged, there is nothing in the inherent nature of petroleum or in the conduct of the business which requires or justifies the oil industry being declared a public utility any more than in the case of any other producer or manufacturer of a commodity of general use.

In marketing gasoline, the problems are no different from those in the wholesaling and retailing of other commodities. Whether there are too many filling stations; whether there is waste in the number of retail stores that market clothing, groceries, beverages or the like, is a problem that concerns our economic welfare as a whole and not particularly any one business. It is self-evident that the problems arising out of competition and the operation of economic laws in every hamlet in the country cannot be solved by a bureau at Washington which undertakes to regulate each minute detail of our vast and complicated business structure. There should be no economic tinkering and no political control.

Unfortunately, governmental agencies, once organized and endowed with some measure of authority, aspire to continue their existence and increase their authority. Any proposal to amend the National Industrial Recovery Act with provisions that convert it from what is theoretically a system of governmentally supervised, industrially self-regulated codes of fair practice into a system of federal industrial dictatorship becomes a striking example of this tendency to encroach.

We have proceeded on the road to recovery sufficiently to consider methods of orderly development of business as a substitute for devices created in moments of national emergency and desperation. The time has come to consider the long range view of American economic progress.

The oil industry is prepared to do its part, and demonstate its confidence in itself and in the future of the country, if it can but know clearly that its efforts are not to be checkmated by constant change, bureaucratic dictation or usurpation of power.

Congress has an unparalleled opportunity to aid recovery by a frank recognition of separate fields of federal and state responsibility under the Constitution.

By order of the Board of Directors:

American Petroleum Institute

By Axtell J. Byles, President

Automotive and refining technologists who discussed volatility of motor fuels at the fuel symposium of the Natural Gasoline Association's annual meeting in Tulsa May 1-3. Front row, left to right: T. B. Rendel, head of Shell Petroleum Corp.'s fuel and lubricant laboratories, Wood River, Ill.; T. A. Boyd, fuel research chief, General Motors Corp.; A. E. Becker, automotive technologist, Standard Oil Development Co. Back row, left to right: Gilbert Way, automotive engineer, The Chrysler Corp.; J. B. Macauley, chief engineer, Chrysler Division, The Chrysler Corp., Detroit

traced to, nor caused by natural gasoline.

Two test cars used by T. B. Rendel, Shell Petroleum Corp., proved to be particularly sensitive in warming-up consumption to differences in volatility in fuels tested, Rendel showed. His laboratory has developed an alinement chart for determining the "car factor" or a "volatility index" from starting performance, and the 20 per cent and/or 70 per cent points on the distillation curve. This chart consists of three parallel scales, prepared and suitably adjusted in the light of actual performance data obtained in operating test cars on a series of fuels under widely varying cold weather conditions.

The tests were carried out at three temperatures, 20°F., zero F., and minus 10°F. Two sets of fuels were tested. One set was prepared with the 20 per cent point constant at 155°F., and with the 70 per cent point varied over a considerable range. The other set held the 70 per cent point constant at 313°F., varying the 20% point.

The engine was operated with the choke out until it had warmed up to where no choke was needed to keep it operating at the predetermined power output rate. The distance traveled by the car during this warming-up period was recorded. The alinement chart developed from these data has proved to predict satisfactorily the starting and warming-up performance of a fuel from these two distillation temperatures.

A continually shifting balance has existed for several years between engine and fuel system designs and motor fuel characteristics, T. A. Boyd, fuel research chief of General Motors Corp., pointed out. In a very comprehensive summary of the trends of, and progress in, engine and fuel system designs during the last few years, Boyd stated that two major trends are evident; one has increased the power output per unit weight of engine and per unit weight of fuel consumed. The other is the great increase in general operating reliability of the newer car models.

While the average car weight has increased about 25 per cent in eight years, the engine weight is up only very slightly. The engine displacement average per ton-mile has also increased very little, he pointed out. The increase in power shown is due, apparently, to higher octane ratings permitting higher compression pressures, to volatility increases and to general improvement in fuel systems and mechanical efficiencies of engine design.

During that period, average top speeds have increased from about 60 miles per hour to about 80 miles per hour, Boyd said. At 50 miles per hour consumption efficiency has increased from about 20 ton-miles per gallon to more than 31 ton-miles per gallon. Down-draft carburetion has increased until in 1935 about 90 per cent of the cars use this type of carburetor.

Boyd stressed the fact that poor manifold distribution is responsible for much of the poor starting and warm-up troubles of the past. Average temperatures of air-fuel mixtures entering the system have been reduced from about 120°F. to 90°F., a drop of 30 degrees in four years, thus permitting the use of the more volatile fuels available in increasing quantity. At the same time fuel line temperatures have been reduced by about 15°F. This permits the use of fuels averaging about two pounds greater vapor pressures than could be used 5 years ago.

Fuel pumps which in 1931 could handle only about one volume of vapor to one of liquid, have had their vapor handling capacity increased several times, practically to eliminate pump troubles with the average type of fuel available, it was stated. Automatic chokes are used on more than half the car *models* for 1935, Boyd stated. This represents a much smaller percentage of all 1935 *cars*, he explained, since the three low-priced models making up a larger than 50 per cent portion of

Goebel Heads N.G.A.A.

TULSA, May 3.—T. R. Goebel, executive assistant, Skelly Oil Co., Tulsa, is the new president of the Natural Gasoline Association of America. He succeeds D. C. Williams, Continental Oil Co., Ponca City, Okla., who held the office for two years.

Other officers also elected at the business session, held in connection with the fourteenth annual convention of the association, are: R. E. Haylett, Union Oil Co. of California, Los Angeles, first vice-president; Fred F. Ketchum, general superintendent of the gas department, Owens, Libby - Owens Co., Charleston, W. Va., second vice-president; and W. E. Reardon, Columbian Gasoline Corp., Shreveport, La., third vice-president.

William F. Lowe was re-elected secretary.

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all cars made, do not use automatic chokes.

Operating on more highly volatile fuels especially, automatic chokes on cars set for lean running mixtures, may produce mixtures above the maximum limit of inflammability when starting cold, J. B. Macauley and Gilbert Way of Chrysler Corp.'s engineering staff, showed. Crankcase dilution now averages about 5 per cent, whereas in former years it averaged 15 per cent or more, reaching 50 per cent under the most adverse conditions, these authors pointed out.

Higher temperature operation, more volatile fuel, closer engine tolerances, and other factors have contributed to this improvement. These investigators have found that good starting is practicable at 0°F. with fuels with 10 per cent points in the 150-160°F. range, with proper attention to the condition of the fuel system, ignition and mechanical condition of the engine.

It is found that the explosive limit of air-fuel mixtures is about 8 to 1. At an atmospheric temperature of 32°F. and air-vapor mixture of 16 to 1, for example, the percentage evaporated of a given gasoline may be calculated from the ratio of the A.S.T.M. to the equilibrium-air-distillation temperatures. From or under the above conditions this ratio is 1.35 to 1, absolute temperatures, and is satisfied by the A.S.T.M. 30 per cent point of 204°F., for a Detroit winter gasoline, Way said. The air-fuel ratio so supplied is 4.8 to 1, to give air-vapor mixture of 16 to 1.

Repeating the same example from the curve of a more highly volatile gasoline, it was found that the ratio of 1.45 to 1 applies between the two curves which is satisfied by the A.S.T.M. 90 per cent point of 252°F. In this case the air-fuel ratio to give a resultant air-vapor mixture of 16 to 1 is 14.4 to 1, or 330 per cent leaner than previously. The two cases show a range of conditions obviously impossible to cover by a single calibration of choke. With the choke calibrated to the 4.8 to 1 air-fuel ratio, for the winter gasoline, the highly volatile fuel would give an air-vapor mixture of 5.6 to 1, beyond the high explosive limit.

Tests on fuels with increasing volatility above the 50 per cent point showed that these fuels did not upset the automatic choke calibrations, did not exhibit stalling characteristics during idling warm-up periods, and had excellent warming-up properties. This indicates, the authors said, that high volatility may be introduced into fuels without using extreme variations in the lower part of the distillation range.

Better, more uniform manifold distribution is the chief reason for the increased performance record made by Dr. G. G. Brown in testing a 1934 car on the road with fuels of greatly increased volatility. Brown and his collaborators found that, in comparing even the poorest performance obtained from three fuels discussed below, the most volatile fuel was 150 per cent better in road performance than the least volatile.

EQUIPPING a 1934 Chevrolet with special instruments to observe and record various operating conditions during the tests, it was found that by carefully insulating the intake manifold, the mixture temperature entering the cylinders was reduced about 50°F. By using this car which is equipped with a so-called "octane selector" or manually variable spark advance, the car could be operated on a variety of fuels of from 40 to 80 octane number. However, the three test fuels selected were of the same octane number, practically speaking.

The test car was equipped with a "fifth wheel" attached to the rear axle and connected to an accurate electrical tachometer, for determining car speeds with the greatest practicable accuracy. A series of thermocouples were installed in fuel line, manifold, water jacket, and elsewhere about the engine and temperatures read by means of a potentiometer installed in the car. Fuel was measured through accurate burettes attached to the fuel system.

The three fuels tested showed the distillation characteristics as given in the following table.

Fuel No.	1	2	3
Grav. A.P.I.	78.1	66.1	65.1
10% Evap., °F., ..	117	137	151
50% Evap., °F., ..	138	198	260
90% Evap., °F., ..	201	290	382
Vapor Pressure, Reid	10.15	7.15	7.05
Octane Number, Motor Method,	65	65	65.3

Fuel No. 1 was composed entirely of natural gasoline; No. 2 of natural gasoline plus 16 per cent of a cracked Gulf Coastal gasoline; No. 3 a mixture of third grade gasoline with 45 per cent of cracked gasoline and 10 per cent of natural gasoline. It was found that, in spite of the same octane number by laboratory test, the spark advance must be varied for the different fuels.

On the road the differences shown between the three fuels was equivalent to about five octane numbers in terms of laboratory test comparison. With the system adjusted to maximum power and economy, that is by spark advance variations, the difference was about eight octane numbers. Because of this, Dr. Brown asked why concern should be felt over as little as two octane numbers, when the car on the road measures no closer than eight numbers?

In making the tests, two stopwatches were used, each being started with the car at low speed, at the same time. When the car's speed had increased by ten miles per hour from the speed at which the watches were started, one watch was stopped, and the time noted. When the speed had increased 20 miles more than the original speed the second watch was stopped, also noting the time. Fuel consumption, as stated, was measured exactly by burette.

Under these conditions, referring here to the "first acceleration" and using rate of acceleration as a measure of maximum power development, Fuel 2 gave 88 per cent better acceleration with the factory spark setting, than did Fuel 3, the least volatile fuel. Fuel 1 was twice as good as Fuel 3. In the second acceleration period Fuel 2 gave 16 per cent better acceleration, with a comparable further increase for Fuel 1. Comparing poorest results on each fuel, rather than the best obtained with each, Fuel 2 is 133 per cent better than Fuel 3, while Fuel 1

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is 150 per cent better than Fuel 3.

Brown urged strongly that some type of "volatility index" be adopted to be used for a purpose similar to the octane number yardstick for anti-knock ratings. He pointed out that it is not necessary that there be so exact a correlation between the numerical value of the volatility index and the fuel's performance. He observed that octane numbers obtained in the laboratory do not always agree at all with the fuel's comparative road performance. The essential idea, he believes, is to adopt a yardstick simple in idea and in calculation, by which variations in volatility may be expressed by a simple number or other designation, and by which some correlation with road performance may be made.

Using the "Volatility Index" devised by Oberfell and Alden, which is numerically the difference between 284°F. and the 50 per cent evaporated temperature of the gasoline being rated, he stated that Fuel 2 is 52 volatility index units better than Fuel 3, while Fuel 1 is 122 units better than Fuel 3.

Economy calculations at high car speeds showed that a gain of 15 per cent is obtained by the most volatile fuel compared to the least volatile, Fuel 3. At 20 miles per hour, however, a loss of 10 per cent in economy was observed. Brown called attention to the fact that, disregarding performance entirely, a better economy is obtained with a heavier than with a lighter fuel. The heavier of course supplies more heat units per gallon than the lighter fuel since its weight per gallon is greater.

Brown and his collaborators conclude, on the basis of the data so far obtained (the study is to continue),that this standard car, under winter conditions, with slight changes in the fuel system, handled the higher volatility fuels extremely well, giving much better performance and comparable economy throughout the tests. Cold carburetion, as was employed on this specially fitted car, cannot be satisfactorily used, he stated, unless a fuel of adequate volatility is available. Qualitatively, these investigators have found that "Volatility Index" units are of the same order of magnitude in increasing acceleration as are octane numbers.

The greater part of the discussion following the presentation of these six papers was given over to the matter of adopting, or working toward the adoption of a suitable volatility index. Brown is of the opinion that the Oberfell-Alden index is satisfactory, and stated that he feels that performance can be predicted satisfactorily from such index values. The chart used by Rendel in the Shell laboratory and road studies has given good satisfaction he found and work along that line is to be continued.

Propose Additional Vapor Pressure Test Method

TULSA, April 26.—After an intensive study of the position of the Reid Vapor Pressure method and its use in the natural gasoline and motor fuel industries, the technical committee of the Natural Gasoline Association of America has decided that a compromise should be made, based on the following principles;

1. Let D323-32T (present Reid Method), remain as it is, with its scope limited to natural gasoline.

2. Adopt the proposed revision of this method as another A.S.T.M. tentative standard, but limit its scope to motor fuel and aviation gasoline.

3. During the next year, establish the dividing line bewteen the two methods.

Very intensive work is being carried out on the improvement of equipment and details of the test method, especially on gage checking, temperature control, and sampling methods. Closer co-operation, especially with the California Natural Gasoline Association, was strongly urged by R. C. Alden, chairman of the technical committee.

Among the subjects which the chairman believes should be taken up by the committee are; study of proposed methods for evaluating natural gas for its gasoline content; testing method improvements related to fractionator and absorber efficien-

cies; value of volatility in motor fuels, and automotive fuel systems. The work of studying sampling methods is being undertaken in conjunction with the A. P. I. standardization project.

Supply Men's Group Plans Handbook

TULSA, May 1.—Compilation of each current year's more important technical data into a handbook for distribution to Natural Gasoline Association of America members during their annual conventions will be undertaken in future years by the Natural Gasoline Supply Men's Association.

The initial step toward this compilation, in handy form, of technical data, was undertaken just prior to the convention here May 1, 2 and 3. The souvenir handbook was so well received that the supply men's board of directors made provision for appointment of a permanent committee to handle the details in connection with the publication of the handbook each year.

The annual meeting of the Natural Gasoline Supply Men's Association was held the morning of May 1, just prior to the opening of the Natural Gasoline Association's convention.

Five new directors were elected at the business session. They are: W. D. Moorer, The Moorlane Co.; G. B. Lane, Foxboro Co.; W. D. McKay, The Cooper-Bessemer Co.; W. W. Woobank, Woobank Pump & Machinery Co., and W. A. Schleuter, Refiners Supply Co.

The directors elected J. A. Lupfer, Worthington Machinery Corp., president, succeeding P. W. Raigorodsky, Petroleum Engineering, Inc. Mr. Lane was elected first vice-president, and Mr. McKay, second vice-president. Mr. Moorer was named treasurer, succeeding Mr. Lupfer.

The Technical Committee will be composed of Mr. Moorer, chairman, and Messrs. Raigorodsky and M. H. Kotzebue, Tulsa Boiler & Machinery Co.

The Membership Committee will be headed by M. F. Waters, Hanlon-Waters, Inc., with Messrs. Woobank and McKay as associates.

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Trend of Motor Fuel Volatility is Still Upward in Atlantic Coast Area

Presented before Natural Gasoline Association of America, Tulsa, May 1-3

By A. E. Becker* and A. D. Bauer*

RECENTLY there has been considerable discussion about the trend in motor fuel volatility since 1931 when the Bureau of Mines semi-annual motor-gasoline surveys were discontinued. This paper is an attempt to bring the picture up to date so far as the Atlantic Coast of the United States is concerned.

A study of the inspection data available in the Standard Oil Co. of New Jersey records indicated that various angles are well covered by analyzing the problem for four sections, Boston and vicinity, Northern New Jersey, the Baltimore district and the Virginia-Carolinas region. For example, the motor fuels marketed in Northern New Jersey are quite representative of those marketed either in Metropolitan New York or in the Philadelphia region. To cover benzol blends adequately Baltimore was selected. Extended winter and summer climatic conditions are covered respectively by Boston and the Virginia-Carolinas district.

We have included data as far back as July, 1929 to obtain sufficient overlap with the published semi-annual reports of the Bureau of Mines. Only regular and premium grades have been considered because of the relatively small volume of third grade motor fuel marketed in this territory.

Although some companies market spring and fall grades which differ definitely from either the summer or winter corresponding grades our study is limited to the latter. This has been done for several reasons. In each district both winter and summer grades are used at least three months. This insures the securing of data representative of these two seasons.

Whether a company has special spring and fall volatility specifications or not there is a gradual transition from winter to summer grades or vice versa. This is due to the relatively short spring and fall periods and the gradual change in motor fuel volatility in storage and distributing tanks when changing a grade seasonally. Moreover there is no single date on which all companies make these seasonal changes. This renders it almost impossible to secure data that would be representative of the spring and fall seasons. As will be seen later the volatility

*Standard Oil Development Co.

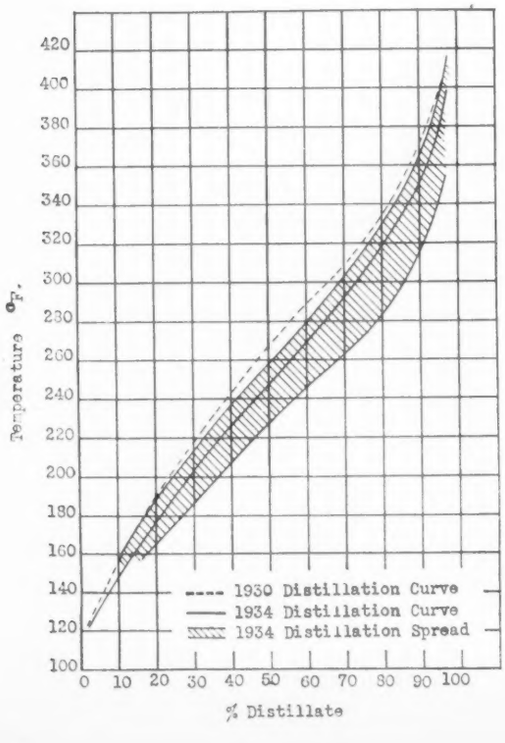
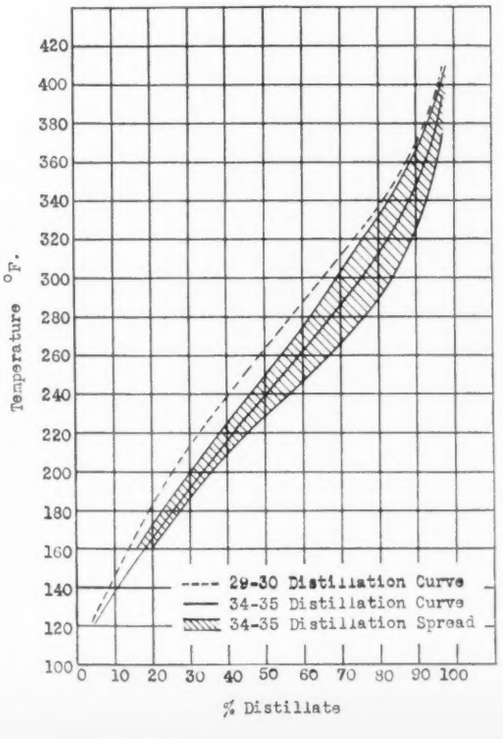
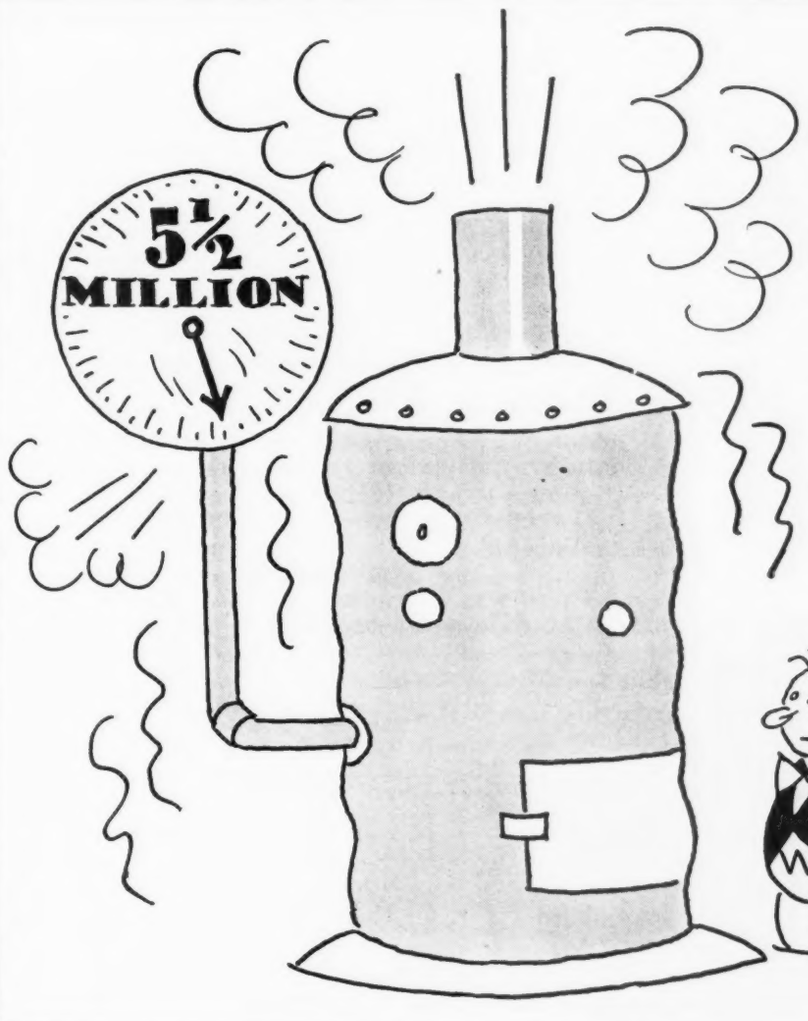


Figure 1 (left) Relation — Gasoline Volatility Trend and Spread, Summer

Figure 2 (right) Relation — Gasoline Volatility Trend and Spread, Winter





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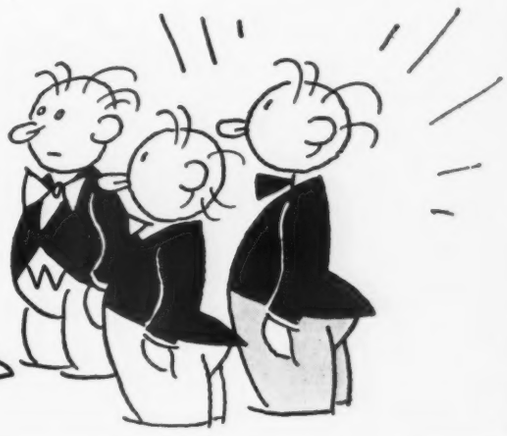

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spread of either summer or winter grades is in general considerably greater than the difference in volatility between the averages for the summer and winter fuels.

Data

Fortunately data for 6 to 12 fuels representative of the grade, locality, and year, both winter and summer, were available for the period 1929 to date. At least six and in most cases 10 to 12 fuels were used in preparing the averages. While sales volume guided the selection of samples when the surveys were made, we have made no attempt at weighting the data. In no case has more than one sample per company grade been used.

The data are shown in Tables 1 to 5. In the first four are tabulated the average vapor pressure and distillation characteristics for the four districts, both winter and summer, for both regular and premium grades of fuel.

The volatility extremes in comparison with the respective averages of the first four tables are shown in Table 5 for the summer of 1934 and the winter of 1934-35. The figures for each item of a section of the table show the minimum, the average, and the maximum of all samples used. No one sample accounts for either all the minima or all the maxima.

In Figures 1 to 4 are shown the average distillation curves for the four districts. The data for summer are plotted on the lines for the indicated years; those for winter halfway between, as this was found to present the picture more truly.

Figures 1 and 2 give a picture for the summer of 1934 and the winter 1934-35, both of the average distillation curves and of the spreads for the regular fuels of the Northern New Jersey district. For ready comparison the average distillation curves for these fuels for the summer of 1930 and winter of 1929-30 are also plotted

No attempt has been made to indicate vapor pressure trend by diagrams since our available data are not extensive enough to cover all districts. Average Reid vapor pressures are given in Tables 1 to 4 wherever sufficient data were available.

Discussion

There was a gradual increase in volatility of the average motor fuel sold in the United States

Table 1

Average Motor Fuel Volatility Data—Boston, Mass.

Summer

Year	Regular 1929	1930	1931	1932	1933	1934	Premium 1929	1930	1931	1932	1933	1934
Reid V. P. lbs.	.....	.....	.....	.....	.....	8.0	.....	.....	.....	.....	.....	7.4
Per cent Dist. @ 122°F.	.....	.....	3.2	2.8	2.5	3.0	.....	.....	3.0	3.6	2.5	2.4
140°F.	7.0	6.9	7.3	8.0	7.3	7.8	6.9	6.8	7.4	8.6	6.7	7.3
158°F.	11.2	11.6	11.9	12.8	12.5	14.1	13.1	12.0	12.3	14.4	12.8	13.7
212°F.	28.4	28.3	28.9	31.0	32.0	35.3	32.2	30.7	34.5	34.6	35.3	38.8
257°F.	.....	.....	.....	.....	52.3	57.0	.....	.....	.....	.....	56.0	60.9
284°F.	59.6	58.9	60.7	63.6	65.5	69.0	66.2	62.4	66.1	68.0	68.3	72.7
356°F.	88.0	88.2	89.6	90.0	90.8	91.8	90.9	90.6	91.4	92.5	92.3	94.0
F. B. P. °F.	410	402	397	403	405	402	401	398	389	389	399	393
Per cent recovery	98.2	98.0	98.0	97.6	97.6	97.8	98.2	97.7	97.7	97.9	97.8	98.0

Winter

Year	Regular 29-30	30-31	31-32	32-33	33-34	34-35	Premium 29-30	30-31	31-32	32-33	33-34	34-35
Reid V. P. lbs.	.....	.....	.....	.....	9.1	9.5	.....	.....	.....	.....	8.0	8.3
Per cent Dist. @ 122°F.	.....	4.2	3.6	3.5	4.5	5.2	.....	4.3	3.8	3.6	3.3	3.7
140°F.	8.4	8.7	8.5	9.0	10.1	11.2	9.9	8.9	8.3	8.8	8.3	9.4
158°F.	13.9	13.7	14.1	14.9	16.1	17.2	16.1	14.5	13.9	14.0	15.0	16.8
212°F.	31.2	30.6	31.9	33.8	36.5	37.6	36.1	33.1	35.9	36.9	39.6	44.3
257°F.	.....	.....	.....	.....	57.9	57.5	.....	.....	.....	.....	60.8	66.7
284°F.	61.6	59.9	63.4	66.4	69.7	69.3	66.5	67.0	66.5	68.3	73.0	77.3
356°F.	88.9	88.5	89.7	92.5	91.9	91.7	90.1	92.7	91.6	92.7	93.7	94.7
F. B. P. °F.	399	402	401	394	401	395	401	391	395	389	391	381
Per cent Recovery	97.5	97.9	98.0	98.0	97.1	96.7	97.6	97.5	98.1	97.7	97.5	97.6

Table 2

Average Motor Fuel Volatility Data—Northern New Jersey

Summer

Year	Regular 1929	1930	1931	1932	1933	1934	Premium 1929	1930	1931	1932	1933	1934
Reid V. P. lbs.	.....	7.2	7.8	8.5	9.0	8.7	.....	6.9	7.5	7.9	9.0	8.3
Per cent Dist. @ 122°F.	.....	1.7	2.0	3.0	3.4	2.3	.....	1.6	2.2	2.3	3.4	2.0
140°F.	.....	5.8	6.2	8.2	9.1	7.0	.....	5.7	6.7	7.1	8.3	6.5
158°F.	10.7	10.7	11.8	13.8	14.9	13.2	13.4	11.0	12.6	13.3	14.6	12.5
212°F.	26.9	27.6	29.2	32.0	34.8	33.8	34.6	30.4	33.1	33.8	36.5	33.9
257°F.	.....	.....	.....	.....	55.2	54.7	.....	.....	.....	.....	59.4	55.8
284°F.	56.9	57.3	60.7	62.5	67.5	66.9	67.7	62.6	67.2	67.7	71.4	68.4
356°F.	86.5	86.2	88.5	88.5	90.5	91.3	90.5	87.6	91.8	91.5	92.4	92.2
F. B. P. °F.	410	407	405	403	404	400	399	404	394	392	387	398
Per cent recovery	96.3	96.6	97.2	97.2	97.0	97.3	96.9	96.8	97.3	97.2	97.0	97.3

Winter

Year	Regular 29-30	30-31	31-32	32-33	33-34	34-35	Premium 29-30	30-31	31-32	32-33	33-34	34-35
Reid V. P. lbs.	.....	8.0	9.4	9.2	9.3	9.7	.....	7.5	8.7	9.2	8.2	8.7
Per cent Dist. @ 122°F.	.....	3.5	4.5	5.5	4.2	4.6	.....	3.2	4.3	4.1	2.6	3.4
140°F.	.....	8.1	9.8	11.3	9.6	10.5	.....	7.9	9.5	9.8	7.5	9.0
158°F.	12.7	13.3	15.1	17.3	15.9	17.1	14.0	13.6	15.6	16.0	14.1	16.2
212°F.	29.4	29.5	33.0	36.5	36.3	37.9	34.0	32.8	35.4	37.0	36.2	41.0
257°F.	.....	.....	.....	.....	59.9	57.9	.....	.....	.....	.....	58.1	63.5
284°F.	60.0	58.2	63.4	67.2	69.0	69.7	66.1	64.5	68.3	70.5	70.4	74.7
356°F.	86.5	86.5	88.5	90.4	91.6	91.6	88.5	88.8	91.7	92.8	92.3	93.4
F. B. P. °F.	407	408	405	401	399	395	400	401	397	390	397	389
Per cent recovery	96.7	96.7	97.1	97.0	96.9	96.9	97.1	96.5	97.6	97.1	97.2	97.4

during the period 1919 to 1931. This is clearly evident from Tables 1 and 2, Part 1, of the "23rd Semi-Annual Motor-Gasoline Survey" of the Bureau of Mines (R.I. 3129). This trend is particularly noticeable for the 10% and 20% distillation points. A study of our data and curves shows that this general trend has continued.

For the most densely populated area of the United States the volatilities of the averages of the regular and the premium motor fuels did not increase materially during 1929 and 1930. This period was followed by a marked increase to a higher level during 1933. After some recession the trend appears to have been definitely upward again the past winter.

For Boston and vicinity the same stationary level is apparent for 1929 and 1930, since which time the trend has been definitely upward. The same observations apply to the regular grade fuels of the Baltimore district. For the premium grades of the latter locality the stationary period was of longer duration. This appears to be a direct result of the local distribution of benzol blend fuels.

The distillation characteristics of commercial benzol are such that about 90% distills below 212°F. It follows that benzol blends will show relatively high "fills" at the 212°F. distillation point. This is effectively exemplified by the sharp dip in 1930 in the 212°F. curve for the summer premium fuels. Our original data show that a fuel, which had previously been and which was subsequently a typical benzol blend, was very low at the 212°F. point at that time and that this deficiency accounted in large part for the dip.

The general trend in the Southern district is somewhat more complex. While the trend for the regular fuels is definitely upward, this is not the case for the premium fuels. At 158°F. there was practically no change in the latter for the summer seasons but there was a sharp increase in volatility at the higher temperatures in 1931, subsequent to which time there has been practically no change. For winter, the volatility trend of the premium grades was definitely downward from 1930-31 to 1932-33. A return to the level of 1930-31 has since occurred.

The tables of the Bureau of Mines' report previously referred to, show that there was little change in the 50% distillation point during the period 1919 to 1931. Our curves show that the

Table 3

Average Motor Fuel Volatility Data—Baltimore, Md.

	Summer											
	Regular						Premium					
Year	1929	1930	1931	1932	1933	1934	1929	1930	1931	1932	1933	1934
Reid V. P. lbs.	.....	.....	7.8	8.9	8.1	8.9	.....	.....	7.2	7.9	8.4	7.9
Per cent Dist. @ 122°F	.....	1.6	2.8	3.7	1.8	3.2	.....	1.2	2.3	2.2	2.0	2.0
140°F	.....	5.6	7.2	8.5	6.9	8.4	.....	4.7	6.5	6.9	7.4	6.3
158°F	9.1	10.5	12.1	13.7	12.8	14.6	11.8	9.9	12.3	12.8	13.7	12.4
212°F	24.7	24.6	28.0	30.7	31.7	35.5	34.9	30.5	35.0	34.5	36.3	40.6
257°F	.....	.....	.....	.....	.....	55.1	.....	.....	.....	.....	.....	58.7
284°F	55.6	56.2	57.5	61.4	64.0	67.2	65.5	63.7	64.9	65.3	67.7	70.2
356°F	84.8	85.7	87.4	88.5	89.4	90.8	88.9	88.1	90.0	89.9	90.7	91.9
F. B. P. °F	415	405	405	401	403	397	401	404	401	400	400	396
Per cent recovery	96.3	96.8	97.3	97.2	97.1	96.8	96.7	97.1	97.6	97.5	97.1	97.4

	Winter											
	Regular						Premium					
Year	29-30	30-31	31-32	32-33	33-34	34-35	29-30	30-31	31-32	32-33	33-34	34-35
Reid V. P. lbs.	.....	.....	9.1	8.3	10.0	10.7	.....	.....	8.0	7.3	8.0	9.2
Per cent Dist. @ 122°F	.....	2.8	4.1	3.2	5.4	5.8	.....	1.7	2.5	2.2	2.9	4.2
140°F	.....	6.8	8.9	8.1	11.1	12.1	.....	5.6	7.4	6.6	7.8	10.0
158°F	12.8	11.4	14.1	14.0	17.5	18.8	11.8	11.2	13.3	12.5	14.2	17.2
212°F	27.9	27.9	31.3	33.9	37.5	38.5	34.3	35.4	34.9	35.1	41.7	40.6
257°F	.....	.....	.....	.....	56.6	57.4	.....	.....	.....	.....	60.7	60.7
284°F	57.9	58.6	61.9	64.5	67.8	68.9	62.6	67.6	65.7	67.8	70.9	71.1
356°F	85.2	87.1	88.2	89.2	91.3	91.6	86.3	90.9	90.0	91.0	92.6	92.1
F. B. P. °F	411	404	402	400	393	395	410	394	399	396	393	388
Per cent recovery	96.5	97.0	97.3	97.4	96.8	96.6	96.9	97.4	97.5	97.5	97.6	97.0

Table 4

Average Motor Fuel Volatility Data—Va., N. C. and S. C.

	Summer											
	Regular						Premium					
Year	1929	1930	1931	1932	1933	1934	1929	1930	1931	1932	1933	1934
Reid V. P. lbs.	.....	.....	7.5	7.6	.....	8.2	.....	.....	7.1	7.1	.....	7.2
Per cent Dist. @ 122°F	.....	2.8	4.1	1.9	.....	2.2	.....	1.1	1.8	1.4	.....	1.7
140°F	.....	6.2	6.4	6.3	.....	7.0	.....	4.6	6.1	5.5	.....	5.9
158°F	9.6	11.3	11.6	12.1	.....	13.2	10.5	10.8	11.8	11.3	.....	10.4
212°F	25.3	27.8	28.8	31.6	.....	33.9	30.1	31.6	34.2	33.0	.....	34.1
257°F	.....	.....	.....	.....	.....	55.8	.....	.....	.....	.....	.....	55.2
284°F	54.8	57.4	59.6	63.7	.....	68.6	62.0	63.1	67.6	68.3	.....	67.6
356°F	85.2	86.1	88.6	89.7	.....	91.6	88.2	88.7	91.9	91.9	.....	91.4
F. B. P. °F	412	406	406	400	.....	394	398	402	398	395	.....	400
Per cent recovery	96.4	96.8	97.8	97.2	.....	97.6	97.1	96.9	97.6	97.5	.....	97.8

	Winter											
	Regular						Premium					
Year	29-30	30-31	31-32	32-33	33-34	34-35	29-30	30-31	31-32	32-33	33-34	34-35
Reid V. P. lbs.	.....	.....	8.1	9.0	9.0	9.5	.....	.....	6.9	7.4	7.6	8.1
Per cent Dist. @ 122°F	.....	3.5	3.1	4.9	4.1	4.8	.....	2.3	2.0	2.5	2.0	2.5
140°F	.....	8.4	7.4	10.3	9.6	10.8	.....	7.0	5.7	6.9	6.1	8.1
158°F	13.5	13.9	12.7	15.9	15.7	17.5	15.9	13.4	11.3	12.5	12.2	14.8
212°F	28.6	29.8	30.4	33.9	36.0	38.2	35.5	38.1	35.3	32.5	36.5	39.2
257°F	.....	.....	.....	.....	56.7	58.5	.....	.....	.....	.....	58.2	60.6
284°F	54.8	58.5	61.4	64.0	69.1	70.1	66.0	72.2	68.7	67.3	70.1	71.8
356°F	85.5	88.2	89.1	88.7	92.2	92.2	88.3	93.3	92.0	91.4	92.4	92.1
F. B. P. °F	407	400	406	409	396	395	400	386	397	395	395	390
Per cent recovery	96.8	96.7	97.6	97.5	97.1	97.1	96.0	97.5	97.6	97.5	97.4	97.4

Table 5

Current Maximum-Minimum Motor Fuel Volatility Data

	Regular						Premium					
	Summer 1934			Winter 34-35			Summer 1934			Winter 34-35		
	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.
Boston, Mass.												
Reid V. P. lbs.	7.1	8.0	9.3	7.3	9.5	10.7	6.6	7.4	8.6	7.0	8.3	10.1
Per cent Dist. @ 158°F.	10.5	14.1	20.0	11.0	17.2	21.0	10.0	13.7	17.5	13.5	16.8	23.0
212°F.	31.5	35.3	43.0	31.5	37.6	43.0	32.0	38.8	71.5	33.5	44.3	74.5
284°F.	61.0	69.0	82.0	66.0	69.3	75.0	65.0	72.7	88.0	67.0	77.3	91.5
356°F.	86.0	91.8	97.5	89.0	91.7	94.5	89.0	94.0	96.5	89.5	94.7	97.5
F. B. P. °F.	364	402	424	376	395	408	380	393	410	350	381	406
Northern New Jersey												
Reid V. P. lbs.	7.7	8.7	9.6	8.5	9.7	11.6	7.7	8.3	9.4	6.5	8.7	10.0
Per cent Dist. @ 158°F.	10.0	13.2	16.5	15.5	17.1	20.0	10.5	12.5	18.0	12.0	16.2	22.5
212°F.	29.0	33.8	42.0	35.0	37.9	40.5	30.5	33.9	38.5	33.5	41.0	53.0
284°F.	62.0	66.9	80.0	63.5	69.7	78.5	63.0	68.4	78.0	65.5	74.7	88.5
356°F.	88.0	91.3	97.0	87.0	91.6	95.0	88.5	92.2	95.5	89.5	93.4	97.5
F. B. P. °F.	363	400	418	376	395	410	376	398	424	373	389	408
Baltimore, Md.												
Reid V. P. lbs.	7.7	8.9	10.3	9.6	10.7	12.7	6.4	7.9	8.7	8.2	9.2	11.5
Per cent Dist. @ 158°F.	11.0	14.6	20.0	15.5	18.8	22.0	5.5	12.4	16.0	13.0	17.2	20.5
212°F.	30.5	34.5	46.0	34.0	38.5	46.0	29.0	40.6	63.0	35.0	40.6	55.0
284°F.	61.0	67.2	80.0	62.5	68.9	79.0	63.0	70.2	85.0	64.0	71.1	90.0
356°F.	88.0	90.8	96.0	89.0	91.6	94.5	89.0	91.9	95.0	87.5	92.1	96.0
F. B. P. °F.	387	397	407	379	395	414	377	396	412	338	388	408
Va., N. C., and S. C.												
Reid V. P. lbs.	7.5	8.2	9.5	8.5	9.5	10.2	5.9	7.2	8.8	7.3	8.1	9.0
Per cent Dist. @ 158°F.	11.5	13.2	16.5	14.0	17.5	20.5	8.0	10.4	14.0	10.5	14.8	21.0
212°F.	29.5	33.9	42.5	34.5	38.2	42.5	30.0	34.1	43.0	33.0	39.2	53.0
284°F.	60.5	68.6	80.5	65.0	70.1	77.0	61.0	67.6	77.5	63.5	71.8	88.5
356°F.	88.5	91.6	97.0	89.5	92.2	94.5	80.5	91.4	95.5	86.0	92.1	96.5
F. B. P. °F.	367	394	417	385	395	408	383	400	422	366	390	410

average volatility increase in the four districts under discussion was most pronounced at 212°F. and 284°F. This is significant. It means that there has been a decided improvement in the average fuel as regards distribution of the charge to the engine cylinders, with consequent improvement in general performance.

That there has been a less marked upward trend at 158°F. is largely attributable to the necessity of providing insurance against the possibility of vapor lock. In passing it might be pointed out that this possibility on the warmer winter days definitely limits the amount of light ends that can be utilized to provide easy cold weather starting. This indicates a feature of design to which the automotive engineer should give serious consideration.

The general increase in volatility since 1919 appears to have paralleled the development of cracking operations, that is, the type and the increase in the percentage of cracked stocks used in motor fuels. As gasoline demand increases the proportion of cracked to straight run stocks will logically increase. This is particularly true if crude supplies should diminish or lag behind gasoline demand. It appears that the present volatility of the average motor fuel will not diminish in the near future, but if anything may increase. This should serve as a guide to the automotive engineer as to the type of fuel that is likely to be available.

Perhaps a better picture of the general increase in volatility is obtained from Figures 1 and 2 for Northern New Jersey. The heavy solid curves represent the averages of the regular fuels for the summer of 1934 and the winter of 1934-35 respectively, while the broken line curves represent the same for the summer of 1930 and the winter of 1929-30. It will be noted that there has been a definite shift to the right, that is to higher volatility throughout the entire distillation range. In terms of per cent distillate this is most marked in the middle regions. From an increase of 3 to 4% distillate at 158°F. the curves diverge to a maximum of about 10% distillate at 284°F. They then converge again as the end-points are approached.

Comparison of this five-year increase in volatility with the shaded portions of Figures 1 and 2 reveals another interesting feature. These areas show the spreads for the entire distillation range during the past year and were obtained by plotting boundary curves through the minima and maxima at each test temperature of all samples inspected. Throughout the distillation range the spread for summer is considerably larger than the average increase in volatility just discussed. The same is also true for winter at 257°F. and higher temperatures. This would seem to refute the general impression that there are no marked differences in motor gasolines commercially available.

Eastern Producers to Meet June 5

PITTSBURGH—The annual spring meeting of the Eastern District Production Division of the American Petroleum Institute will be June 5 and 6 at the William Penn Hotel in Pittsburgh, it has been announced by J. H. Newlon, district chairman.

Among the subjects of papers to be presented are "Future of natural oil producing methods in the Eastern United States oil fields," "Flooding—past and present, together with its future possibilities," "Latest methods of pumping oil, including equipment," "Latest methods of fluid removal from gas wells," "Acid treatment of oil and gas bearing formations," "Past experiences and future possibilities of locating subsurface structures by seismograph in the eastern oil and gas fields," and "Plugging of permeable sand lenses in repressuring projects."

F. F. Schauer, Equitable Gas Co., will be toastmaster at the stag dinner the evening of June 5.

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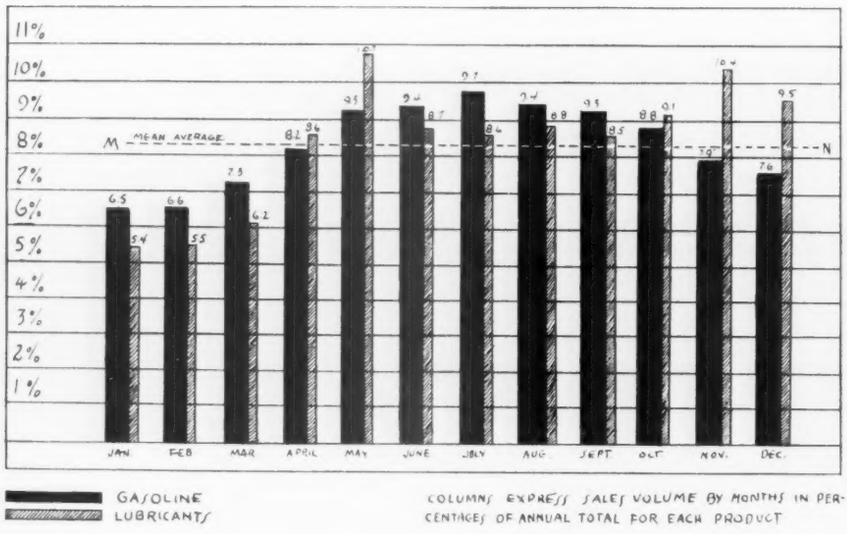
This chart, prepared by a large oil company, indicates the sales peaks for gasoline and lubricants. It can be seen that the greatest profit possibilities are just ahead



Summer Conditioning Service

Can Bring 14 Cents Per Gallon Profit To 1000 Gallon Station

One large oil company shows its dealers the possibilities for profit in the servicing of cars for summer driving. While the season is well along, there are still many motorists who have not yet had their cars prepared for the hot months ahead.

NOW is the time to issue that last call to motorists to prepare their cars for summer driving. Although the season is well under way, there are still plenty of summer profit possibilities from that group of car owners who wait until the last possible moment to have their car serviced for the summer.

There are many opportunities driving into stations even now that may be had by a little diplomatic sales approach. Motors are in many instances still to be flushed and the correct grade of oil added, to say nothing of changing to a summer lubricant in the transmissions and differentials.

Many spark plugs are still to be cleaned or changed; filters need renewing; tops are to be dressed and cars polished or waxed. There is still a good summer market available for tires and tubes, and radiator flushings can probably still be discovered in cars whose owners have forgotten that they still have a dose of anti-freeze in their radiators.

How much of a market is available in this summer conditioning service? How much profit can be made by selling the "extras" that go to make up the summer conditioning job? A large oil company, whose dealer touch the entire United States, has answered those questions by means of a pencil and paper and some common sense thought.

This company has assumed that a 5000-gallon-per-month station will have at least 125 regular customers who will purchase at least 40 gallons per month each. (125 x 40 = 5000). Reducing this to a 1000-gallon basis for the sake of a simpler comparison, it results in 25 customers buying 40 gallons per month at a 1000-gallon per month station.

These 25 customers are good prospects for the summer-profit items shown in Table 1.

The oil company making this study then took the items appearing in the right hand column of Table 1, and with the approximate selling price and profit of each, obtained the total profit from the plus items, as indicated in Table 2.

Putting it on a basis of 1000 gallons of gasoline, this means that it is possible to realize a profit of 14 cents per gallon when all the summer servicing possibilities are figured in. In addition to this profit, there is the added income that is possible through the sales of polishes and polishing cloths.

The company that made this tabulation then goes further to prove that these figures are by no means obtainable only by perfect selling. Additional efforts with the pencil and paper show that a 1000-gallon station, averaging 5 gallons fill per car, makes 200 car owner contacts.

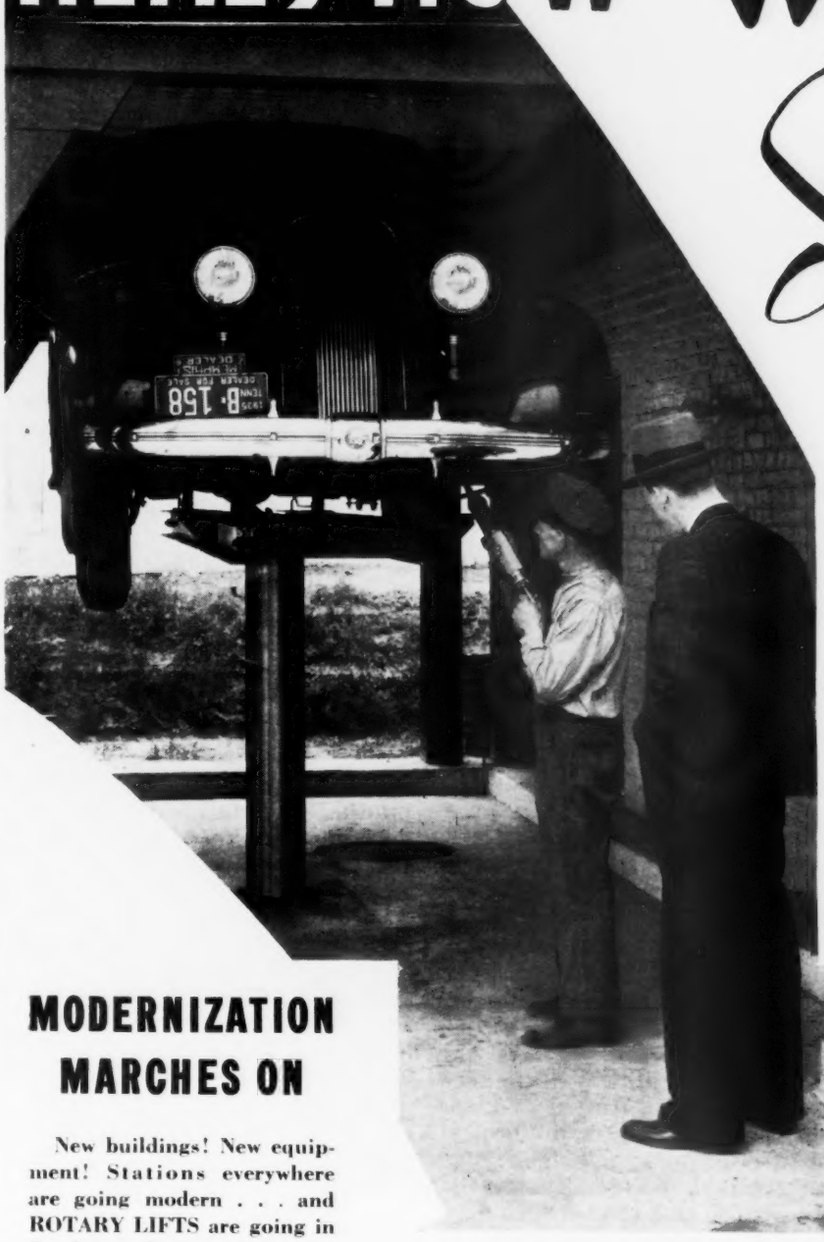
Out of these 200 contacts,

Table 1

Sales Opportunities of a 5000-Gallon Station

25 drains—5 quarts per drain—125 quarts or....	31 gallons motor oil
25 gallons flushing oil—1 gallon to flush.....	25 gallons flushing oil
25 grease jobs	25 grease jobs
25 trans. and diff.—7½ pound average.....	187 pounds gear lubricants
25 trans. and diff. flushed—1½ qt. avge —37 q's.	9 gallons flushing oil
25 wheel pulls	25 wheel pulls
25 customers—1/3 with filters.....	8 filters
25 sets spark plugs cleaned—6 to set = 36.....	36 spark plugs cleaned
1½ sets new spark plugs 1000 gal. @ 15 mi. = 1½ plugs	9 spark plugs new
25 tops dressed	25 tops dressed
25 radiators flushed	25 radiators flushed
3 tires and tubes—1000 gal. @ 15 m.p.g. = approx.	3 tires and tubes

HERE'S HOW WocoPep Successfully ENTERS THE MEMPHIS MARKET



WocoPep invades a new market. Seven attractive stations, all modernly equipped with ROTARY LIFTS, have recently made their bow to Memphis motorists. And, if sales records of the first few weeks can be taken as a guide, old style stations with outmoded equipment and methods are going to be shy a good many customers from now on.

The quality of your greases and oils alone will not sell your lubrication service. Motorists look for and expect something more. They find it in these new stations. That's why they are doing so well. It is the same story the country over. Modern stations opening up daily, featuring up-to-date equipment with ROTARY LIFT SERVICE, are getting the business.

MODERNIZATION MARCHES ON

New buildings! New equipment! Stations everywhere are going modern . . . and ROTARY LIFTS are going in for faster, cleaner, more accurate lubrication, crank case, and undercar services. Include ROTARY LIFTS in your new stations and modernization plans.

●

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Table 2

Extra Profit Possible at a 5000-Gallon Station

	Items	Approximate Selling Price	Approx. Profit	Profits
31	gallons motor oil	60c to $1.20	40c	$12.40
34	gallons flushing oil	40c	12c	4.08
25	grease jobs	50c to $1.00	50c	12.50
187	pounds gear lubricant	25c	15c	28.05
25	wheel pulls	$1.00	90c	22.50
8	filters	$2.00 plus 25c installation	80c	6.40
36	spark plugs cleaned	5c	5c	1.80
9	spark plugs—new	60c	20c	1.80
25	tops dressed	40c pint plus 25c applying	40c	10.00
25	radiators flushed	50c	20c	5.00
3	tires and tubes	$8.00 both	$2.00	6.00

Total summer profits per 1000 gallons on plus items..... $110.53

Add to this total the profit on 1000 gallons of gasoline (approximately 3c or $30.00), and the grand total comes to $140.53.

states the company figures, you only have to sell

25 drains or approximately 12½ per cent

25 grease jobs or approximately 12½ per cent

25 trans. and diff. services or approximately 12½ per cent, etc

However, the point to bear in mind is that the opportunities to realize 14 cents profit on every gallon of gasoline sold are at hand right now. Although spring is now well along, there are still many motorists in the "put-it-off" class who can increase sales volume for those awake to the opportunities.

Policy on Merchandising Accessories Of Oil Companies is Criticized

CLEVELAND, May 2

THE policies of the large oil companies in selling private brands and little known brands of automotive accessories and other supplies, aside from petroleum products, at their stations is criticized by Robert M. Bowes, president of the Bowes "Seal Fast" Corp., Indianapolis, manufacturers of automotive products.

These policies, he believes, are dictated to a great extent by the purchasing departments of the oil companies rather than by executives who can vision the possibilities for greater profit through sound merchandising programs at their stations.

Such executives, in his opinion, think only of the showing which can be made in their purchasing of little known brands of grades which can carry their own brand labels. In so doing they reduce the opportunity for the operators at their stations to make a larger profit from the sale of accessories and sundries and endanger their general merchandising program. Mr. Bowes comments as follows in a letter to NATIONAL PETROLEUM NEWS;

"This above outlined tendency, as compared to a broadminded 'building-up' to a much higher type of retail selling and a much more intelligent retail merchandising effort, with the objective of gaining increased volume of profits for service stations—well, there is no honest and intelligent comparison. An actual check on results is the only way to tell that story.

"Back of the broadminded program there should be, of course, all the dominant forces of successful merchandising such as specific national advertising, promotion of selling, 'goods-display' at stations and trained personal salesmanship focused on the specific retail selling job to be done at the stations.

"The general 'bunk' of jabbing up service station attendants in the attempt to make them swoop down upon customers like eagles capturing their prey is not doing the job nor will it ever do the job. Both the attendants and the customers are human beings and some of these supposed-to-be smart subordinates who are advising oil company executives as to how sundries and accessories should be sold in service stations, still have that to learn with so many other things about successful merchandising that it isn't even funny. It is just a case of trying to do a cheap, long profit grabbing job, as compared to doing a high grade, intelligent volume-profit job of merchandising.

"WHAT I mean by the preceding paragraph is that the average man who has been hired by the major oil company to build up a program to sell sundries and accessories in stations, does not know enough to do a high grade and intelligent merchandising job for a volume of profits in service stations. Consequently he turns to the easier and only way out to save his own skin . . . he 'chisels' to get a long profit on what is *bought* by motorists who come to service stations.

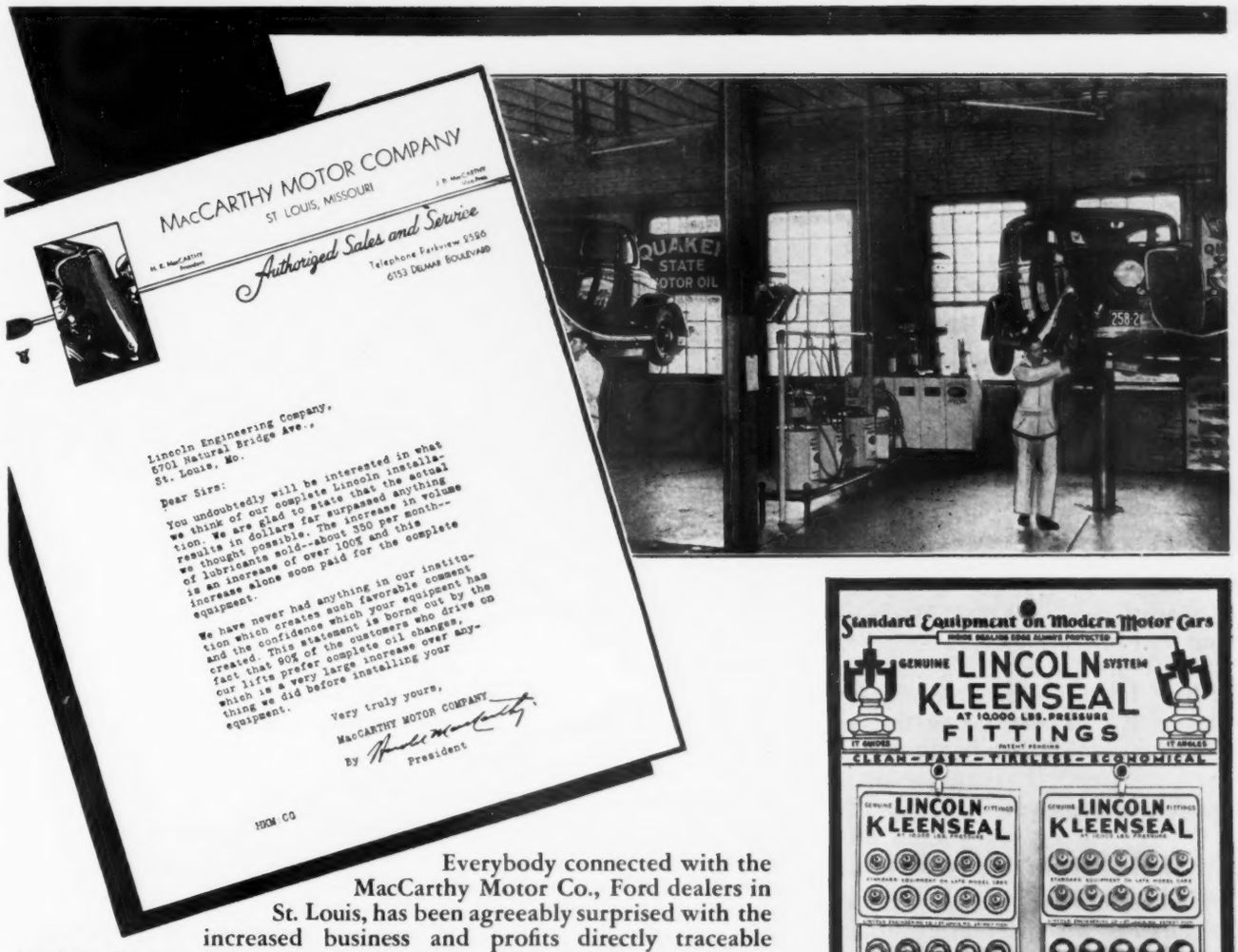
"There could be three dollars made through intelligently merchandising to motorists as compared to one dollar made through merely letting motorists 'buy' but the man assigned to the job doesn't know how to merchandise to motorists so as to make the three dollars. Therefore, he follows the old last resort method, the old 'chisel' system of trying to hack profits out of buying instead of building far greater profits through building up to the maximum selling opportunity."

Joins Jersey Standard

NEW YORK, May 1.—Jay E. Crane, a deputy governor of the Federal Reserve Bank of New York, has been made assistant treasurer of the Standard Oil Co. (New Jersey). Mr. Crane resigned from his bank position on April 30.

Mr. Crane was with the Federal Reserve Bank for 20 years, principally serving in its foreign department. In 1930 he was made a deputy governor.

Business Increased 100% with LINCOLN EQUIPMENT


MacCARTHY MOTOR COMPANY
ST. LOUIS, MISSOURI
Authorized Sales and Service
Telephone Parkview 5586
6153 DELMAR BOULEVARD
Lincoln Engineering Company,
5701 Natural Bridge Ave.,
St. Louis, Mo.
Dear Sirs:
You undoubtedly will be interested in what we think of our complete Lincoln installation. We are glad to state that the actual results in dollars far surpassed anything we thought possible. The increase in volume of lubricants sold--about 350 per month--is an increase of over 100% and this increase alone soon paid for the complete equipment.
We have never had anything in our institution which creates such favorable comment and the confidence which your equipment has created. This statement is borne out by the fact that 90% of the customers who drive on our lifts prefer complete oil changes, which is a very large increase over anything we did before installing your equipment.
Very truly yours,
MacCARTHY MOTOR COMPANY
By
President
HKM CO

Everybody connected with the MacCarthy Motor Co., Ford dealers in St. Louis, has been agreeably surprised with the increased business and profits directly traceable to their Lincoln lubricating equipment . . . Favorable attention was gained... Customer confidence grew... Grease jobs increased from 175 to 350 per month—and the added volume soon more than paid for the complete set-up.

Thousands of car dealers, service station operators, garagemen and fleet owners throughout the world know from experience that it pays to lubricate "the Lincoln way."

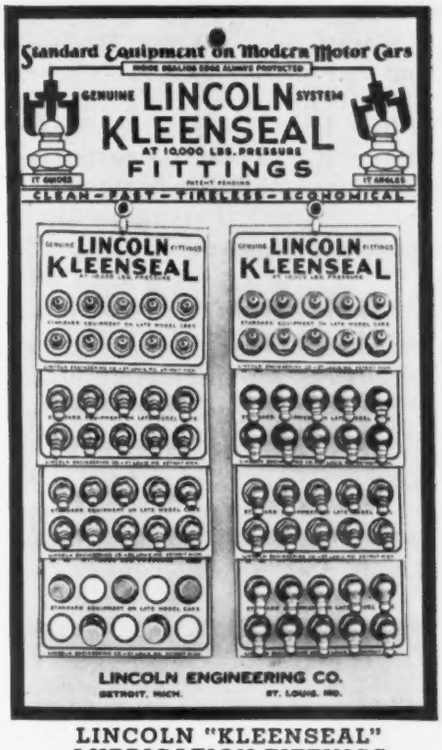
You, too, will be surprised with what you can do with a set-up consisting of a Lincoln Lubmobile or TWIN Lubrigun for dispensing chassis lubricants, Gear Lubricant Dispenser, Filler Pump, Drainmobile, a complete set of Lincoln Lubriguns and related items. A combination can be made for your particular requirements.

Speed . . . cleanliness . . . efficiency . . . economy . . . and sales appeal are all essential factors you will enjoy with this equipment.

If you do not know all about this modern, complete line of dispensing equipment, guns and fittings—*please request details.*

LINCOLN ENGINEERING COMPANY
5701 NATURAL BRIDGE AVENUE ST. LOUIS, MO., U. S. A.
FACTORIES: ST. LOUIS AND DETROIT

LINCOLN
LUBRICATION EQUIPMENT



LINCOLN "KLEENSEAL" LUBRICATION FITTINGS
are standard equipment on leading makes of cars

You appreciate the big replacement market that exists for fittings—and here's your chance to cash-in on it. The attractive counter or wall card (illustrated above) holds 8 different numbers (7 cards of 10, and 1 of 5—a total of 75 fittings)—an assortment of most popular replacements.

Fittings are easy to remove from cards, and depleted stocks are easily replenished by ordering cards of ten through your jobber. By purchasing fittings on *cards* you are assured *genuine* Lincoln KLEENSEAL Fittings.

When requesting details and prices on these popular fittings, it will pay you to also inquire about the new Lincoln KLEENSEAL Grease Guns. These remarkable little guns (to be used by car owners and operators of small fleets) are available in eight models, listing at $1.50 to $2.50 each. They are designed for one hand operation for dispensing chassis lubricant, cup, semi-fluid, water pump, wheel bearing, universal joint lubricants, etc.

SELLING AT STATIONS

As Seen by N. P. N. From the Road

Service Station Sells 150 Service Jobs

The "Powder Puff" station of the Waupun Oil Co., at Waupun, Wis., sold over 150 lubrication and wash jobs in March, and the same merchandising effort is to be continued.

Harry Cross, head of the company, employed a salesman whose principal job is to solicit work for the service department. The salesman helps out at the station, in selling and servicing, but all spare time is spent on the streets soliciting work.

Motorists need lubrication and car washing service, Mr. Cross believes, and are willing to buy, but today it is necessary to go out and ask the customer to buy to obtain the business.

Massachusetts Service Station Sells Coal

Packaged coal is now being sold at the 5 service stations of the George W. Pickering Co., Salem, Mass. The bag contains 25 pounds of anthracite nut coal. The package is blue and is imprinted with the brand name of "Blue Coal". It retails at 20 cents per bag.

The company has been in the packaged coal business for some time, selling to grocery chains and other stores in this section where coal-fired stoves are widely used. While this idea of selling the coal at the service station outlets is new, the company reports good sales turnover through its newly discovered sales channel.

Bucking Ford, Road Freak, Helps Sell Gasoline

Considerable publicity came to the Texaco station of Walter Cramsie, Elizabeth, N. J., when he sponsored the appearance of a "bucking flivver" that loped through the streets much to the amusement and even amazement of those that saw. An old open model T Ford had been strangely altered by C H. Dowdell, local boy, who possesses marked ability as a creator of freak transportation.

The front wheels of the car are off center, and the balance of the vehicle is such that when the clutch is touched the front end jerks up into the air. By applying the hand brake the car then runs in circles upon its rear wheels. Appropriate Texaco signs identify the "flivver" as a member of the Fire-Chief family. The station name and address is conspicuously painted upon all sides. Headlights were made from five-quart oil cans.

"It attracts attention even standing still," said Mr. Cramsie, "and when it tours the neighborhood, with the driver wearing a Fire-Chief helmet and shirt, it certainly makes our locality 'Fire-Chief' conscious." The Ford is one of a series of features being employed to keep the Cramsie station in the public eye.

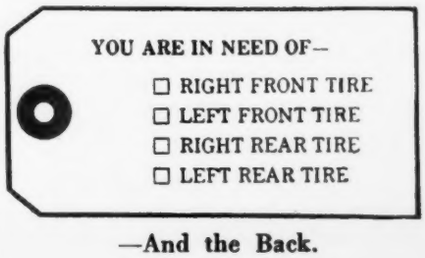
After renting the bucking Ford to a rodeo show where it was driven by four clowns before approximately 60,000 people, Mr. Cramsie stated, "It's a lot of fun, and darned good business, as the station gallonage shows."

Employs a "Summons" To Sell Tires

Many folks who have parked their cars in the downtown section of North Wilkesboro, N. C., have received a summons similar to the one shown here. Dick Cashion, who operates Dick's Service Stations in that city, designed the card, a deep yellow with black letters.

Each night one of his salesmen inspects every parked car in the downtown section. When he sees a car that needs new tires, for instance, he fills out one of the tags and attaches it to the door handle. The car owner discovers it, and that he needs a new tire, and where he can buy it. Cashion states in the April issue of the *Esso Dealer* that he has won many new customers through his little scheme. He takes down license numbers of the cars tagged and follows up by telephone and personal calls.

The Front—



—And the Back.

functional buildings
are gallonage producers

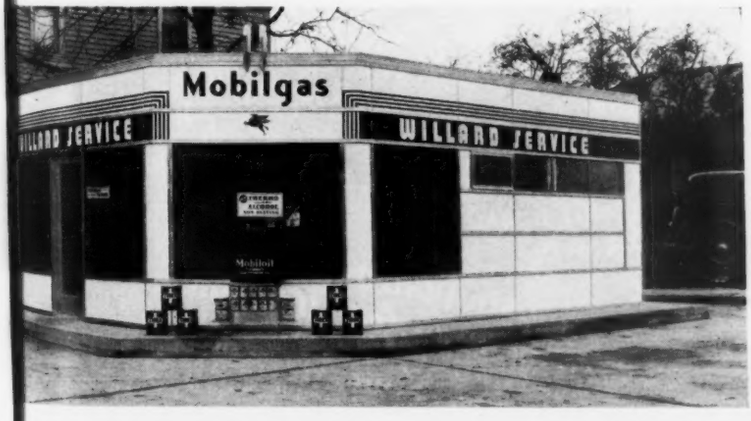
Functional construction is adaptable to rounded, angular or square corners

FUNCTIONAL BUILDINGS build better gallonage. Their cleanliness and colorful beauty attract the extra volume that in many cases means the difference between profit and loss. Their speed of erection means minimum loss of revenue days. Their architectural beauty and modern design are obtained without sacrificing practical utility. They are rugged and fire-proof; require virtually no maintenance; can be enlarged, made smaller, or moved to different locations. The materials used are glass, porcelain enamel and aluminum. Unlike the earlier developments in this type of construction, our patented floating assembly effectively cushions every panel against temperature change and road shock.

Every Functional Building is individualized to meet the architectural and trade-mark requirements of its owner and there are no limitations as to design and colors. The owner has a choice between single or double wall construction.

The cost of Functional Buildings is entirely in line with conventional construction costs. The Functional method is also adapted to low-cost modernization and resurfacing of existing buildings.

The gallonage increases reported by our customers have been published in the editorial columns of this magazine.



There are no limitations as to architectural style or design

WRITE TODAY for the 24 page illustrated catalogue. If you require estimates and sketches please send plot plan and copy of trademark material. Quotations will include complete erection unless otherwise requested.

Functional Buildings, Inc.

11612 MADISON AVE. CLEVELAND, OHIO

Manufactured and Erected by

THE JOHN HARSCH BRONZE COMPANY

TWENTY YEARS OF DEPENDABILITY

253 MORE OUTLETS PROVED PROFIT

WEDGE-SELLING

Sensational Sales Reports from a Few!

WEDGE-SELLING

Iowa Distributor:
"Lost no time in getting the jump on competition. I'm away ahead of last month."

Illinois Distributor:
"Two new dealer accounts signed on the strength of my own sales with Skelly."

Chicago Suburban Distributor:
"I absolutely would not have believed I could boost gallonage as I have with Skelly. Selling plenty of good profit merchandise, too."

Kansas Distributor:
"Superior gasoline and motor oil, with your advertising and selling help, started me off with a good increase."

Colorado Distributor:
"Every man is learning to sell under your new plan. We're going to get some profits out of this business yet."

Nebraska Distributor:
"We're off for the races here. Your advertising brings in people we never saw before. More power to you."

Oklahoma Distributor:
"I am mighty glad I signed when I did. People just naturally come in because of these Skelly signs. There must be something to it."

Missouri Distributor:
"Another dealer last week, and about all I did was tell him I was handling Skelly now."

Wisconsin Distributor:
"We have started off in fine shape, and with a substantial increase the first four weeks."

Minnesota Distributor:
"I wouldn't believe these increases were possible right off the bat, but they're on my books, thanks to Skelly."

Iowa Distributor:
"Sorry I held out so long but I am making up for it now. You showed me where the profits are, and how to get them."

"WEDGE-SELLING"—IT'S THE NEW PROVE

TAKE ON SKELLY'S PLAN SINCE FEB. 1

EVERY DISTRIBUTOR FACES THIS

Problem: To find a line of products whose name is a synonym for quality... hooked up with consistent advertising whose success in building driveway traffic is PROVED beyond all doubt... hooked up with a merchandising plan whose success in turning every "drive-in" into a profit is likewise PROVED. No smart oil man wants a "we think it will" plan. It's got to be one ready to go, to ring the cash register for PROFITS, once the signs and globes are up!

253 DISTRIBUTORS SINCE FEB. 1 HAVE FOUND THIS

Solution: Skelly quality is never questioned! An absolute sensation, is Skelly's famous driveway traffic builder which marketers in other territories are paying Skelly for permission to use! Tested in 11,000 service stations, it hasn't missed yet! Every "drive-in" a PROFIT customer, with Skelly merchandising methods tuned to the times! ONLY a Skelly representative can present this plan, for ONLY Skelly offers such a plan and only to selected distributors in selected territories. Want to sell AGAINST, or WITH Skelly? Mail the coupon.

CLIP AND MAIL THE COUPON TODAY!

SKELLY OIL COMPANY

KANSAS CITY TULSA
CHICAGO DES MOINES
WICHITA OMAHA
MINNEAPOLIS

SKELLY

Skelly Oil Co.
Kansas City, Mo.

Give us the facts!

Name .....

Address .....

.....

Company .....

PROFIT PLAN—ACT NOW!

The Colonial Ave. station of the Master Auto Service Corp. at Norfolk, Va. In addition to the effective displays in the many windows about the buildings, the station itself is a study in impressive display. The building in the foreground houses the accessory department and the office. The rear building is devoted to servicing operations, including lubrication, tire and battery service, and motor repair

Virginia Marketer Does $350,000 Business With Two Stations

By John W. Thompson,
N. P. N. Staff Writer

• • •

SAM and Jack Green will tell you that there is no secret to selling 1,000,000 gallons of gasoline a year at two stations, nor is it particularly difficult to move 25,000 gallons of motor oil in a year's time at the same two outlets.

Norfolk, Virginia, is the address of the Green brothers, and the name of their company which operates two of the finest one-stop stations in that city, is the Master Auto Service Corp.

Each station has a complete accessory store and facilities for quick installation of any of the items carried in stock. In addition to a major brand of gasoline, these stations carry all popular brands of canned oil, tires, batteries, auto radios, radio tubes, golf balls, cigars, cigarettes, soft drinks, and confections.

An itemized list of the services which the company offers its customers includes specialized lubrication, washing and polishing, waxing, tire vulcanizing and retreading, battery service, ignition service, brake adjustment and relining, minor motor adjustments, wheel alignment, and road service.

Starting in 1925, the company completed the first year with a gallonage of 325,000, and the 1934 report shows a million gallons of gasoline sold at the two stations.

The business is set up in three divisions—(1) gasoline and oil, (2) tires, batteries, and accessories, and (3) service, which includes washing, lubrication, and service on tires, batteries, and motors.

In 1934 the sales of gasoline and oil totalled $200,000, with income from tires, batteries, and accessories amounting to $120,000, and service business reaching $30,000. The grand total reached $350,000 for 1934.

Sam Green says that the secret of any station's success, including his own, is 50 per cent due to location, 25 per cent to the products handled, and 25 per cent to personnel.

"Most people are inherently friendly," remarks Sam Green, in a voice that matched the Virginian congeniality about his station, "and they like to be treated in a friendly way. We make friends of our customers."

The men in the various departments are all specialists in their lines. "Our men are trained in their respective jobs," said Mr. Green. "They never hurry or sacrifice speed for efficiency. They work under the most favorable conditions in light, well ventilated, and spacious quarters. We see that they use the most modern equipment and the finest products and we are sure that this policy has played a large part in our growth".

The Green brothers have

It takes GENUINE EGGS

Photo Courtesy "Delineator"

. . . to make a cake that TASTES right!

YES, and it takes Pennsylvania Grade Crude to make a motor oil that *performs* right!

Cakes and motor oils are alike in this one respect: you have to use the best materials to get the best results. You can do wonders with substitutes, of course; but the results you get with substitutes aren't likely to win any prizes.

Many refiners are using new processes these days, but no process can take the place of Nature's own chemistry. Any process produces better oils from Pennsylvania Grade Crude than it does from any other crude in the world. Pennsylvania motor oils are, as they always have been, *better oils from the ground up!* That is your most powerful selling point.

When you sell Pennsylvania motor oils under the Association emblem, you have another advantage no new oil can imitate. Pennsylvania oils have been thoroughly tested in actual service for 40 years and have proved their superiority.

We are telling your customers these facts. The Association's national advertising is in its twelfth consecutive year—breaking all records for continuous creation of consumer demand. It establishes a background against which the individual merits of your Pennsylvania motor oil can be successfully sold.

Pennsylvania Grade Crude Oil Assn.
Oil City, Pennsylvania

Below is the famous Pennsylvania emblem—the insignia of this Association. It is not a brand, nor does it guarantee equal quality among the brands which display it. It guarantees that the member's motor oil sold under it meets the minimum standards set by this Association, and is made 100% from Pennsylvania Grade Crude Oil. It pays to sell under this emblem.

Battery charging room of the Master Auto Service Corp. station at Norfolk, Va. Last year over 12,000 batteries were charged in this department

learned the secret of accessibility and display at their stations. Easy approach from the street gives the stations a welcoming appearance which invite trade.

As for display, there is no mistaking that each station is fully prepared to render a complete automobile service. Numerous window displays and well placed signs give the passing motorist an impression that here is a neat station that can supply him with practically anything for his car.

Of particular interest from the display angle is the lubritorium at the Colonial Ave. station. Lining the back and side wall are sizeable quantities of one and five-quart cans of the eight popular brands which the station carries. The display is large enough to be impressive and can be easily seen from the drive by the motorist. Canned oil comprises 90 per cent of the stations' total oil business. This business has reached these proportions largely because of the demand built up through the predominating canned oil display.

Last year more than 15,000 cars were lubricated at the two stations, requiring a total of about 12 tons of grease. The Master Auto Service Corp., distributing a well known make of tire in Norfolk and 26 counties in Virginia and the Carolinas, did a $100,000 business in this line last year. The two Norfolk stations in 1934 charged over 12,000 batteries in their battery service department.

"We keep away from weird promotion schemes", explained Sam Green. The Master Auto Service Corp. usually sends out some advertising literature in the monthly statements to customers. This material is usually in the form of a blotter or folder describing a particular phase of the company's service, such as lubrication, batteries, tires, or accessories. Local newspapers are used at regular intervals to acquaint the people with the various items that the company carries and to keep the name before the public.

A feature of the advertising plan comes on a day in June each year, when the company dominates an entire section of one of the local papers with news about the features of the stations, their personnel, and interesting facts about the products that are handled. This section of the newspaper, referred to as the Master Service Section, features the anniversary of the company each year. The expense is carried partly by the Master Auto Service Corp., and partly by the various companies who supply these service stations with the products they sell. These companies contribute by buying advertising space in the section. The pages of the section are made up in typical newspaper style with all the stories pertaining to the Master Service and the products it sells.

The company has added, and retained, a number of customers through the excellent service which it gives on emergency calls on the road and about the city. Eight service trucks are on duty between the hours of 7 a.m. and midnight. Each one is equipped to render service on tires, batteries, and motors. The trucks are equipped to care for a variety of troubles, such as flat tires, clogged feed lines, vacuum tank repairs, and battery and starting troubles. Last year these trucks answered over 10,000 service calls in Norfolk. Sam Green explained that they were successful in this service operation because of the quick service they could give on emergency calls. That type of service makes customers for the stations.

The repair department at the station confines itself only to minor motor adjustments and accessory installations. Gasoline is fed to the Colonial Avenue station through a pipeline from the tank car siding of the supplying company several blocks away.

If the Green brothers have built their business by making friends of their customers, they have also done it by smart display sense.

Planning Subcommittee Is Disbanded

LOS ANGELES, April 27.—Disbanding of the planning and development subcommittee was authorized by the central committee of Calfornia oil producers at its meeting April 26. In the future all plans for the development of new pools will be prepared by the staff of the oil umpire for submission to the committee.

The same meeting disapproved proposals to send oil producers of the state a questionnaire asking preferences as to voluntary curtailment, state control, federal control, or the interstate oil compact. The administrative subcommittee's opposition was on the ground that it involved politics and that oil associations of the state were already attempting to secure the desired information.

ADVERTISING PAGES REMOVED

Interesting TRADE ITEMS

Grease Gun

A "sight-hole" through which the lubricant in the gun may be identified, is the latest improvement announced by The Lubrication Corp., Chicago, developers of the Standix Cartridge Lubrication System.

Across the upper portion of each cartridge, and extending around the container, is an identifying symbol which shows through the circular opening in the barrel.

* * *

Display Rack

The Union Steel Products Co., Albion, Mich., is providing a line of steel wire racks and display stands for oil packages which permit the oil to be displayed and identified easily to the customer. The wire display stand is built sturdily of welded steel, said to be practically indestructible. The unobtrusiveness makes the product take the attention of the potential customer, it is said.

The wire crate is of similar construction and enables stacking of bottles or cans.

* * *

Station Jack

The No. 756 hydraulic Lift-A-Car jack, recently added by the Walker Mfg. Co., Racine, Wis., to its line, has a capacity of two tons. A safety valve prevents overloads. The jack will handle and move all of the new as well as old model cars with ease, it is said.

* * *

Bulk Station Pump

Roots-Connersville Blower Corp., Connersville, Ind., is announcing its Type "T" pumps for bulk stations. Features of these pumps are combined rotary positive and centrifugal advantages preventing vapor lock, one moving part, a balanced impeller, without metal-to-metal contact. Positive internal seals rotating with the shaft eliminate stuffing boxes, it is said.

* * *

Steel Container Catalog

Wilson & Bennett Mfg. Co., Chicago, Jersey City, and New Orleans, is now distributing a new 128-page catalog showing a complete line of steel pails, barrels, and drums of ½ to 65-gallon sizes.

The catalog includes illustrations, descriptions, and complete specifications on all of the sizes and styles and the filling and dispensing openings that are available.

Several pages in color show the lithographed containers used by many manufacturers. The importance, from a sales and advertising standpoint, of these containers is also emphasized.

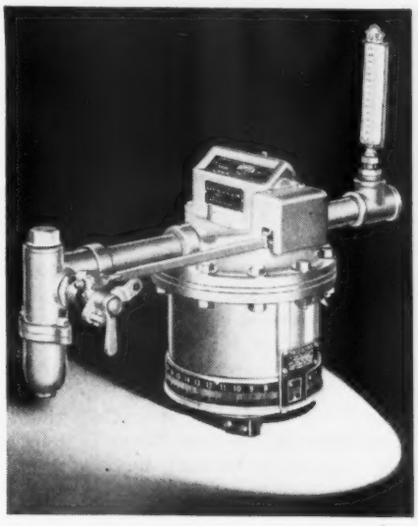
Announcement is also made of the purchase of the Ohio Pail Co. of Middlefield, Ohio. All of this company's accounts have been taken over.

* * *

Refractory Products

The General Refractories Co., Philadelphia ,has prepared a series of 10 booklets describing the company and its plants (No. 101), four of its products—fire clay brick (No. 201), plastic fire brick (No. 203), chrome base high temperature cement (No. 204), fire clay and cyanite base high temperature cements (No. 205)—four fields of use for its products—boiler plants (No. 303), metallurgical processes (No. 301), oil refineries (No. 304), and rock products industries (No. 302)—and special refractories (No. 202) produced in its southern plants.

* * *



Can Filling Unit

The Xacto can filling unit, being announced by the S. F. Bowser & Co., Fort Wayne, Ind., has been designed to fill cans at bulk plants and depots. It automatically measures, records and discharges any one of three pre-determined quantities of oils.

Changes in temperature and gravity are compensated by means of a sensitive dial. The thermometer provides a constant check on temperature. By reference to a chart, the dial number corresponding to a given temperature and gravity is determined.

Accuracy is well within all legal tolerances, it is said, and measurement is more positive and fool-proof than other methods. The meter is a volumetric displacement measuring instrument with positive piston displacement regardless of speed of flow or intermittency of flow. Every cycle of the working mechanism, every gear and cam in the unit, makes one complete revolution for every fill.

The recording mechanism records up to 100,000 fills and repeats.

The unit may be operated by either gravity or pump pressure and speeds up to 40 quart fills per minute are attainable. The units may be supplied with a portable carriage and the operation of the meter can be synchronized with the conveyor travel direct to the can-sealing machine.

* * *

Air Powered Hoists

Bulletin C-27, describing air powered cranes and hoists of the Curtis Pneumatic Machinery Co., St. Louis, has just come off the press. It gives reasons for the use of air power rather than other forms of power.

* * *

Tire Handbook

The 1935 edition of the "Operators Handbook", designed to distribute information of more or less technical nature on truck, bus, farm service and industrial tires to all those interested in tire performance has just been published by The B. F. Goodrich Co., Akron, Ohio.

Among the new features of this year's volume are a page on "Factors Governing Proper Tire Selection" and a page "Load and Service Diagram". There are also two pages on "Load Analysis".

* * *

Division Manager Appointed

Joyce-Cridland Co. announces the appointment of J. P. Gentry as southern division manager with headquarters at the home office in Dayton, Ohio.

* * *

Underwriters Issue Supplement

A new list of inspected fire and accident protection appliances and gas, oil, and miscellaneous appliances has been published by the National Board of Fire Underwriters as a supplement to the list of July, 1934.

Among the items listed are a number of fire extinguishers and alarms, gasoline pumps, oil burners and accessories, storage tanks, valves for hazardous liquids, and cleaning materials.

* * *

Condensate Units

Condensate units are covered by Bulletin 260-B14 just issued by Roots-Connersville Blower Corp., Connersville, Ind. They are intended for heating systems and boiler feed service and are built in sizes ranging from 2000 to 70,000 square feet of radiation. They are designed to handle water at 190° F. with a margin of safety.

Letters to the Editors

The accompanying letter written by Dr. E. R. Lederer, Texas Pacific Coal & Oil Co., Fort Worth, refinery allocator under the code for the East Texas District, is in reply to comment on the East Texas refining situation made by Lawrence E. Smith, NATIONAL PETROLEUM NEWS *staff writer, in the April 10 issue, p. 24-A.*

Dear Editor:

I have read the remarks of Mr. Lawrence E. Smith, in the "Panorama of Petroleum in the Mid-Continent" on page 24A of the April 10th issue. Apparently he is crticising allocations for East Texas. Please let me state here first that as Allocator for District 5C, East Texas, I am more than anxious to receive constructive criticism and advice, and all the help I can possibly get, because it is a very complicated, cumbersome and unsatisfactory job.

There is a group of from 12 to 16 refiners who fill out questionnaires sent to them; however, the statistical information we gather from these questionnaires, or through local inspectors, from the R. R. Commission and other sources of information, is not as accurate as we would like to have it. The refineries operating on untendered crude naturally do not report to the Allocating Agency at all, and the actual allocations are really made during the Agency meeting each month at the Blackstone Hotel in Tyler. We invite every East Texas refiner to these meetings, and endeavor to conform strictly with the provisions of Article IV of the Code when breaking up the District allowables to the individual refineries.

We must realize that under conditions existing in the past and also at present, a certain amount of gasoline will be produced from illegal crude and find its way to the market, and therefore cannot be ignored or distributed to the reporting refiners only, but set aside in the allocators' meeting with the National Co-ordinator in Washington. Therefore, the sum total of the district allocation decided upon in Washington might seem large but actually it is divided into two operations, first to those refiners who are operating on legal crude, and second to the hot oil refiners. Naturally the district as such is very anxious to get as large an allocation as possible. These refiners are always optimistic that in the next month they will be capable of obtaining either through purchase or court procedure more crude or cracking stock than the known allowable crude connections can supply, and we have to consider such statements covering additional crude supply and agreements we make with these refiners to operate only on "legal crude" in order to give the district a fair and equitable gasoline allocation. We have to face the fact that East Texas, like every other district, has a largely overbuilt refining capacity, and that so far we have not been able, due to reasons only too well known, to suppress unethical, unbusinesslike and illegal operations in East Texas. We all realize and know only too well from past experience that East Texas is a menace to the stability of the oil business, and further, that we have only persuasion to support our endeavors to regulate that district and convince gradually these refiners, that it will be more advantageous to them to operate on a businesslike, co-operative basis with the other districts rather than on a strictly opportunistic basis.

I have to correct the figures you show in your article because they did not consider certain returns of unused gasoline allocation to the National Co-ordinator, nor withdrawals from stocks, which are included in the shipments and reduce actual production by the amount of the withdrawals. I am giving you now the corrected figures:

December, 1934—original allocation to District 5C, 700,000 barrels; final allocation 486,000 barrels; returned to National Co-ordinator, 214,000 barrels. Actual shipments during this month from 26 refiners who had received allocations, were 331,381 barrels. While we presume that the difference of 154,619 barrels was absorbed by refiners who operated again on illegal crude after the buying program was officially discontinued, our records show that truck shipments, which extended at that time also in Louisiana, Oklahoma and Arkansas, probably absorbed that amount.

The seemingly high figure of 700,000 barrels was based on an understanding in **November** when the last buying program was in operation, that 100 per cent of the East Texas refiners would subscribe to this buying program and abide by their allocations. We actually had at that time 79 refiners signed up under the buying program, and therefore had no "illegal gasoline" to contend with. You remember that this buying program actually continued into December because the purchasing companies wanted to live up to their agreement to take the gasoline contracted for before the Oil Administrator repudiated it during the API meeting.

January, 1935—original allocation to 27 refiners, 468,000 barrels; final allocation, 422,565 barrels. I returned to the National Co-ordinator, 46,335 barrels of unconsumed allocation. Actual shipments in January were 493,694 barrels, but this figure includes all shipments in tank cars from 34 refiners and sales organizations. During this month we estimate there was a stock withdrawal of at least 150,000 barrels which covers the difference between shipments and final allocations, and truck shipments of "hot" gasoline.

February, 1935—original allocation to the District, 449,000 barrels; return to the National Co-ordinator, 49,000 barrels; final allocation to 15 reporting companies, 310,000 barrels; actual shipments, 423,056 barrels. There was an estimated withdrawal from stocks of nearly 100,000 barrels which again covers the over-shipment by non-reporting companies and "hot" gasoline truck shipments.

March, 1935—original allocation, 618,000 barrels; return to the National Co-ordinator, 200,000 barrels; net final allocation to the district (16 reporting companies), 405,640 barrels; shipments, 389,088 barrels. The balance and stock withdrawals on which we have no report as yet, will again cover "hot oil" truck shipments.

In April we allocated to the district 550,000 barrels and gave to 15 reporting companies operating on legal crude, 438,870 barrels, leaving a reserve of 111,130 barrels to cover "hot oil" shipments.

For May we adopted a policy to assign to the reporting companies such share of the district allocation which, from information we endeavered to obtain here, would permit them to operate on the same basis as in the previous months. This was 446,000 barrels. Thus we left a reserve of 198,000 barrels with the National Co-ordinator to cover possible requests for allocation from such refiners as will change their operations to legal crude and convince the District Allocator that they are actually operating on legal crude, and the balance to cover non-reporting and "hot" gasoline production. You must further realize that the allowable crude production connected to, or controlled by the individual East Texas refiners, varies every month. At the present time it is 18,394 barrels a day with access to an additional seven or eight thousand barrels of the free crude which these refiners can purchase. Some of them also have withdrawn lately some of their crude production which they formerly sold to major pipeline systems, and use this crude to manufacture their gasoline allocation.

At 4½c per gallon for 400 end point gasoline, and 4⅝c for 390 end point gasoline with corresponding higher octane number and 60c for fuel oil, the East Texas refiners can realize $1.296 per barrel crude run, not considering any additional value for distillate, kerosine or gas oil, and therefore their earnings are higher if they run their own legally produced crude rather than sell the crude at the posted price of $1.00.

I hope that this rather lengthy explanation, which I could enlarge with many more details, will give you a clearer and more correct picture of the allocating problem in East Texas.

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- Thirty-seven great tankers transporting Gulf oils from field to refinery and from refinery to water terminals.
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- Forty thousand retail outlets serving the American motorist with Good Gulf products from Maine to Texas.

Working in unison this well-built organization staunchly maintains the Gulf traditions of quality and service which have brought Gulf Refining Company products the great public acceptance they enjoy today.

GULF REFINING COMPANY

GULF

• MARKETS •

CLEVELAND, May 6

THE stability of tank car gasoline prices was further enhanced last week as retail prices were advanced over a wide area. Kerosine took the market leadership in some of the Mid-Continent districts when the plowing season got under way and demand was increased.

Standard of Indiana advanced service station prices throughout its territory 0.3 cent. It was the third advance in this amount since the first of the year. Socony-Vacuum, Standard of New Jersey, and Standard of Louisiana also advanced service station prices in all or parts of their respective territories.

Socony-Vacuum also announced a 0.25-cent advance in its tank car price at New York harbor, Boston, Providence, and Portland. The advance was effective today.

The Standard of New Jersey advance brought service station prices in southern New Jersey up to normal. This eliminated one of the factors which have been holding down tank car prices in the northern seaboard districts.

The Gulf market was inactive last week. Volume of material for immediate shipment was limited, and some sellers were inclined to advance quotations. Others believed that an advance might bring out additional offerings which the market could not absorb at this time. Inventories there were not burdensome, however, and the feeling was general that prices would work higher as soon as the consuming season was a little further advanced.

In the opinion of some market observers the whole question of tank car prices was about to reach a critical point. Jobber buying has been retarded by the continued unfavorable weather which has kept consumer buying at low ebb. Also, inter-refinery buying can not be continued indefintely in the face of slack consumer buying. Few refiners could afford to store their gasoline production in case inter-refining buying should be withdrawn.

The situation in East Texas is so much improved over a year ago that it could not well be considered a menace just now. There are, however, about 25,000 barrels of "hot" crude produced every day, according to reports.

Gasoline consumption was unusually high in some Mid-Continent districts last week due to the contour and listing work being financed by the federal government. Refiners were getting some good returns on this business as all the purchases were on the open market. This demand was expected to practically clean up all available supplies of gasoline at some plants.

The plowing season got under way las week and virtually all kerosine available in the Mid-Continent was sold. East Texas normally supplies a good deal of kerosine, but there was none offered in that district. Most of it apparently had been shipped to the Gulf. Prices were on the upgrade.

Kerosine was tight at Chicago, also. Little material was available for immediate shipment and inquiries brought out no additional offerings. Higher prices were expected.

Pennsylvania refiners were getting a good play in kerosine, but most of it was due to demand from cracking plants rather than from consumer buying. Pennsylvania gasoline has been moving in good volume and at relatively good prices. Cracking operations have been increased substantially as a result. One or two plants have disposed most of their kerosine-distillate to the crackers.

Some improvement was noted in lubricating oils. The Mid-Continent lubes did not show any appreciable change but increased inter-refinery buying of Pennsylvania bright stock at rising prices indicated activity toward placing this oil on a firmer basis.

Trade sentiment in the Pennsylvania market was much more optimistic as a result of this action. The oversupply of bright stock has been a source of good deal of trouble for the western Pennsylvania refiner. The continued threat of lower prices has kept buying on a hand-to-mouth basis at the buyer's price. That this will be changed in the near future appeared certain to several important market observers.

N. P. N. Gasoline Index

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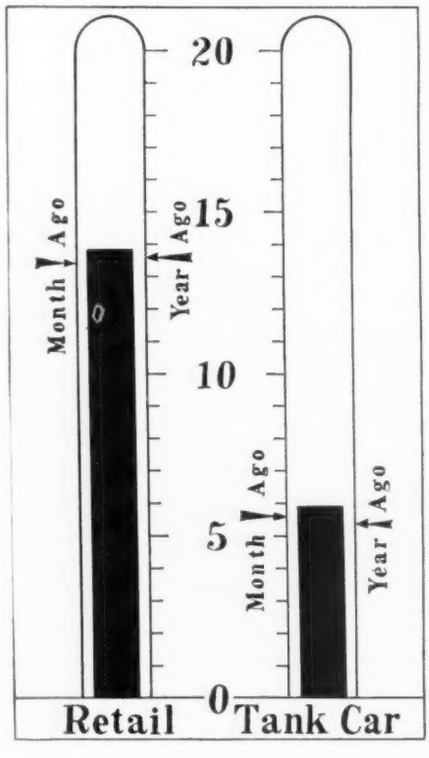

Retail index is an average of 50 cities, ex-tax, and tank car is a weighted average of 13 wholesale markets for middle octane gasoline. The gasoline price index this week represents the following prices in cents per gallon:

Date	Retail	Tank Car
May 6	13.82	5.89
Month ago	13.41	5.56
Year ago	13.60	5.42

Trower Back at Desk

TULSA, May 2.—Harry A. Trower, vice-president in charge of marketing for Phillips Petroleum Co., Bartlesville, Okla., was able to be at his office April 30, The first time in several months.

Mr. Trower was seriously injured, as was Mrs. Trower and Mr. and Mrs. Russell Riggins, in an automobile-train crash in Missouri early last fall.

Mid-Continent

Kerosine Scarce

TULSA, May 4

RETURNS on the Federal Government's investment of $576,000 for prevention of soil erosion in the middle west were beginning to come in not solely to the government, but also to refiners and jobbers in the Mid-Continent.

During the last week or two terracing and contour listing has been started in Texas, Kansas and Oklahoma. This represents the government's efforts to curb wind erosion in certain parts of these states where the dust storms of the past few weeks have been originating. A large portion of the appropriation has been spent in purchasing gasoline and oil used by landowners in carrying on the work. Supplies have been purchased on a free-trade basis—not on contract.

Refiners adjacent to the Texas-Oklahoma Panhandle have reported the largest increases in business — mostly from regular jobbers who serve the trade in the dust-ridden areas. Kansas refiners serving western Kansas by truck reported increased shipments also. Some North Texas refiners indicated that additional business for shipment into the Panhandle was making inroads into the volume of gasoline going north.

Additional business was in the form of increased takings by regular contract jobbers and to some extent from jobbers who buy spot. In some cases the increased consumption of gasoline has caused jobbers to deplete their stocks. In replenishing stocks there has been less tendency on the part of some to work on a hand-to-mouth basis. More buyers were willing to lay in gasoline supplies above current needs.

Unfavorable motoring weather through much of the country has been responsible for the delay in spring buying. The weather factor that controls gasoline consumption continues to exert influence on the purchasing program of many jobbers. Refiners have taken cognizance of this fact and have so arranged their sales policies.

Inter-refinery purchases of gasolne have filled the need for shipping instructions left by the lack of open market business. This activity on the part of large companies whose marketing policies require outside purchases have kept the Mid-Continent clear of virtually all distress offerings.

Gasoline prices were steady to higher in the Mid-Continent the week ended May 4. Advances of 0.125 cent were made on low octane U. S. Motor in several districts. The middle octane grade was less reactionary in price. High gravity gasoline prices were moving up in sympathy with low octane U. S. Motor and 400 e.p. grades. Shipments, however, were light.

Kerosine closed the week in extremely tight position. Orders on May 4 exceeded available supplies and prices were advanced 0.125 cent in several districts. Several large refiners have been scouring the market for this product. Current orders from their contract jobbers were larger than their production. This demand coupled with increased inquiry and orders in the open market, caused a "seller's market" to develop. Production of kerosine in East Texas, formerly the "supply depot" has been curtailed drastically.

The 41-43 w.w. grade was selling at 3.875 to 4 cents in Oklahoma. Resale purchases were being made on this basis also. The 42-44 grade was 0.125 cent higher. Prices for kerosine from other districts were being advanced in line with Oklahoma.

Plowing activity in the agricultural states was one reason given for the increase in business. The change in method of refunding state tax on gasoline used for agricultural purposes in Oklahoma was causing more farmers to use either kerosine or tractor fuel instead of third grade gasoline.

Passage of legislation for control of the Panhandle gas situation caused natural manufacturers and exporters of natural to take stock of present storage conditions and to look forward to future supplies.

The result of the legislation, most manufacturers believe, wlil be a reduction of 50 per cent in natural gasoline production in the Panhandle. Virtual shutdown of some natural plants would result, according to some.

In the meantime manufacturers are accumulating stocks of natural. Cargo buyers have manifested interest in natural supplies as far ahead as August. Suppliers were playing a waiting game and operating on a day-to-day basis. The future trend of natural prices will depend largely on date the order is promulgated, amount of storage and the demand for available supplies.

Jobber demand for stabilized natural was less keen. High prices and the lack of available naphtha had discouraged blending operations to some extent.

Excellent demand for tractor fuel has caused manufacturers of this fuel ot advance prices 0.25 cent. Quotations of 4.25 cents for the regular grades and 4.5 cents for the light grades were general throughout the Mid-Continent.

Reductions of 0.25 cent for the 2000 viscosity red and pale South Texas lubricating oil did not become general during the week. At least two manufacturers reduced price for this grade to 9.75 cents. Others continued to quote 10 cents. Sales at the 10-cent level were being made on oil with a desirable viscosity index.

Mid-Continent lubricating oil showed little fluctuation during the week. Stocks were in good statistical position. Open market demand was light, although contract shipments were fair.

Wax was holding steady at a low of 2.125 cents f.o.b. plant for Gulf shipment. The 124-126 grade was moving as high as 2.375 cents, f.o.b. plant, for domestic shipment.

California

Some Underselling Continues

LOS ANGELES, May 3

PACIFIC Coast petroleum markets were irregular the past week and reports as to the trend of prices were conflicting. Tank wagon quotations for deliveries of major-company third-grade gasoline to points in Los Angeles Basin area were nominally firm at 13 cents a gallon, including 4-cent tax, and indications were that all major companies were strictly conforming to the terms of the supplementary marketing agreement effective two weeks ago.

Secondary companies, however, had not all been brought into line. They were charged with continuing to sell to their distributors at less than their posted prices and with failing to withhold deliveries from service stations that offered any brand of gasoline at less than established retail prices.

Refiners operating outside the Pacific Coast Petroleum Agency also continued to be a disturbing factor through the increasing volume of competitive gasoline they forced on the market at distress prices. Considerable quantities of independent competitive and so-called "bootleg" brands of gasoline were offered for delivery in the Basin area at 11.5 cents a gallon or, in exceptional cases, at 11.25 cents.

Natural gasoline quotations were somewhat weaker, with supply slightly in excess of demand. Prices remained unchanged at from 6 to 7 cents a gallon, delivered at refinery.

Kerosine prices were weak and irregular. In an effort to unload surplus stocks, some independent refiners were permitting their products to be used as premiums in the sale of lubricants. Their jobbers were offering to furnish kerosine at cost if the retailer placed a sufficiently large order for greases and lubricating oils. As a result, 38-40 water white kerosine was quoted as low as 4 cents a gallon, f.o.b. refinery.

Fuel oil prices continued strong and

were fractionally higher under the influence of contracts awarded during the week by the Japanese government and of the U. S. Navy bids to be opened May 7. Contracts made by the Japanese government covered approximately 300,000 barrels of fuel oil to be delivered in June, July and August. General Petroleum Corp. was a successful bidder at a reported price of about 84 cents a barrel. Other bids ranged up to as high as $1.06 a barrel.

Pacific Coast seaboard markets continued quiet with no important changes in quotations. Few inquiries or spot sales were reported.

Chicago

Retail Advance Boosts Prices

CHICAGO, May 4

THE third 0.3 cent advance this year in tank wagon and service station gasoline prices, effective May 2, through the Indiana Standard territory was the highlight of the Mid-Western tank car market the week ended May 4.

Later in the week some sellers reported that higher retail prices had stimulated business. Others indicated that the increase in volume of open market orders was, at best, nominal.

The tank car market for gasoline and kerosine continued to display advancing tendencies through the week. The latter commodity was especially favored, with prices for all grades advancing 0.125 cent, and available supplies held to the barest minimum. As the week drew to a close, still higher prices were being asked in many quarters.

The action of the kerosine market, the week ended May 4, closely resembled the progress of gasoline for the past several months. There were no dips apparent, this commodity forging steadily ahead.

Sellers reported that the fact that East Texas supplies of kerosine have not been a market factor for some time, was the principal reason for the active strength in this branch of the petroleum commodity market recently.

Too, farming operations which, according to reports, have suffered a decided set-back this season, recently have gotten underway in earnest in much of the territory. This was causing a more active call for kerosine.

Also, the fact that crude was being run to special tractor fuels was making itself felt in the tight condition for this product.

Gasoline, according to many traders, was about to present its many "ifs" shortly. If inter-refinery sales continue to take up surplus; if weather conditions improve sufficiently to increase consumption to the extent where it will be felt in the tank car market; if many plants, now closed, remain off stream—there will be no doubting the market's possibilities.

"If conditions remain through the next several months as they are now," said one veteran trader, "we will have 6-cent low octane motor and 4.5-cent kerosine."

If, however, East Texas again becomes an active factor in this market; if weather conditions continue to seriously retard consumption for any length of time; if the higher prices now being obtained for commodities influences refiners to actively offer material through this market in an effort to attract "new business"—in these events, prices are bound to suffer adverse reactions, in the opinion of the majority of the trade.

Higher tank car gasoline prices became an actuality May 2 when offers of low-priced third-grade U. S. Motor had decreased to the extent where the scattered cars being offered no longer were representative of the general market.

One of the most encouraging features noted in the gasoline market for the past two months or more has been the almost complete absence of offers of "intransit gasoline," shading published prices. Only occasional cars of this distress gasoline have been noted from week to week, and, except in extreme intances, these were sold at published lows.

As the week ended, there was little disposition to quote higher than 4.625c for low octane U. S. Motor. The belief was quite general that tank car gasoline prices would hold at or near present levels, with little being done to cause further upward reactions by sellers who still were in complete command of the tank car gasoline and kerosine situation.

Eastern

Higher Prices In Offing

NEW YORK, May 4

HIGHER wholesale and retail gasoline prices were in the offing in New York and New England portions of the Atlantic seaboard as sellers generally reported they would advance prices May 6, following the lead of Socony-Vacuum.

On May 2, Socony announced that effective May 6 it would advance retail gasoline prices 0.2 cent in eastern New York and New England states and would advance tank car gasoline prices 0.25 cent at New York harbor, Boston, Providence and Portland.

Socony's new tank car price schedule for the above points will be 6.50 cents for branded gasoline, 6.25 cents for unleaded above 65 octane, 6 cents for 60 to 64 octane and 5.75 cents for low octane gasoline. Other sellers apparently were lining their prices up somewhat similar to those of Socony.

Earlier in the week sub-normal retail price markets in New Jersey and New York City were restored to normal which brought practically all of the northern seaboard on a normal basis.

No cargo purchases of gasoline in the Gulf for domestic shipment were made during the week, but on the other hand there apparently was very little gasoline there which the holders were anxious to move at present prices. While some suppliers thought that 5.25 cents was a trifle low for above 65 octane gasoline at the Gulf, others said that while the market was steady at this figure they believed that any higher prices would bring some gasoline on the market which was not now being offered.

Reports of higher prices which are prevailing in the Roumanian gasoline markets lent considerable encouragement to American exporters. However, most of them were not looking for any heavy pickup in European demand, despite the tighter situation in Roumania. Quotations of 5.84 cents, f.o.b. Constanza for light gasoline were prevailing at last reports, traders said.

Although one cargo of 64-66, 375 e.p. gasoline for export shipment was sold early in the week ended May 4, the gas oil market was the most active one at the Gulf. One European buyer purchased three cargoes of 30 plus gas oil at 3.125 cents f.o.b. the Gulf for future lifting. This oil was reported to meet number 2 specifications. Suppliers' ideas of this market were higher and many were now holding out for at least 3.25 cents.

Divergent opinions of the market for Grade C bunker oil were heard. Some suppliers were holding out for $0.85 a barrel for cargo purchases while there apparently was some full specification material available for prompt lifting at $0.80 a barrel.

Kerosine prices were steady, both along the Eastern seaboard and at the Gulf. Jobber demand was light in most quarters, while cargo buyers seemed not much interested in this product at present.

Wax

Market Still Quiet

NEW YORK, May 4.—Wax markets continued quiet the week ended May 4, according to most traders. Price quotations on the scale waxes were practically unchanged in all quarters.

Sellers reported a steady movement of fully refined wax, both to domestic and export buyers, but with ideas of prices about unchanged. Most sellers said they did not anticipate any changes for the present, at least.

Pennsylvania

Bright Stock More Active

CLEVELAND, May 6.—A threat of lower prices for bright stock was overcome early last week and, as the week ended, the Pennsylvania market appeared to be in better shape than it has been in for some time. Prices were firm to higher.

Despite the recent decline in bright stock inventories and the increased activity in the week ended April 27, offers to sell bright stock at below current market tended to increase early last week.

These offers were withdrawn, however, when several large buying orders were placed in the market. Sentiment among traders became more optimistic, activity in bright stock increased, and prices turned upward.

Offerings of 600 steam refined were less numerous, and most refiners advanced their quotations 0.25 cent. Quantity of 600 stock available at current prices for immediate shipment was limited.

The position of neutral oils was unchanged. Occasional offerings at below the market were reported, but generally speaking prices were well held.

Higher octane gasoline moved up 0.25 cent during the week. Most refiners were sold up for May. All the material available for immediate shipment was held for higher prices, according to reports. U. S. Motor gasoline was well held. Several refiners were inclined to advance their prices, although others appeared willing to sell at current levels.

The sustained demand for 65 octane gasoline was having a good affect on kerosine and fuel oil.

Jobber demand for kerosine was showing signs of easing, and some traders were of the opinion that the big season for kerosine was over. This decrease in demand was not reflected in prices, however, due to the fact that cracking operations were on the increase and one or two refiners were selling most of their kerosine-distillate to the crackers.

Much the same situation existed in fuel oil. The steel mills and the crackers were in the market for more fuel oil than was offered, and the price was bid up. In the Bradford-Warren district where fuel has been difficult to obtain for the past two or three weeks, sales at 4.25 cents, up 0.25 cent, were reported. In the lower field the price advanced 0.125 cent.

Wax prices apparently were more firm. Buyers were bidding prices slightly higher than those prevailing two or three weeks ago. No substantial increase in demand was anticipated.

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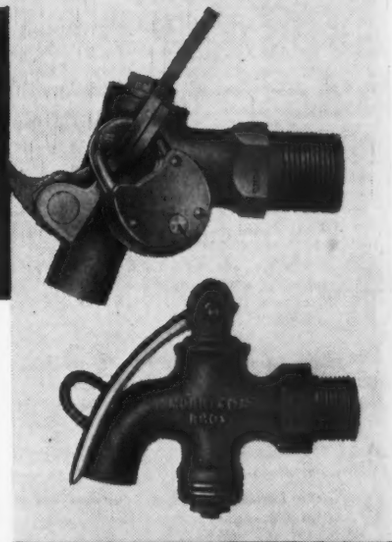

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Prices in cents per gallon, tank car lots, except where otherwise noted. Prices are those to domestic jobbers who resell to consumers. They do not represent inter-refinery sales, or sales for export. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude.

Gasoline *and* Naphtha

	May 6	April 29	April 22
Oklahoma			
48-54, 450 e.p. naphtha	4.625	4.50	4.50
U. S. Motor gasoline, by octane numbers:			
62 and below (3rd grade)	4.625– 4.75	4.50 – 4.625	4.50 – 4.625
63-70 octane (regular)	5.25 – 5.50	5.25 – 5.375	5.25 – 5.375
71 and above			
60-62, 400 e.p. gasoline	4.625– 4.75	4.50 – 4.625	4.50 – 4.625
64-66, 375 e.p. gasoline	4.75 – 4.875	4.625– 4.75	4.625– 4.75
68-70, 350-360 e.p. gasoline	4.875– 5.00	4.75 – 4.875	4.75 – 4.875
Western Penna. (Quotations and/or sales prices to car unloaders)			
Bradford-Warren:			
52-54 naphtha	5.125– 5.25	5.125– 5.25	5.125– 5.25
Motor gasoline:			
U. S. Motor (58-62°)	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375
Minimum 60 octane	6.75 – 6.875	6.50 – 6.625	6.50 – 6.625
Minimum 65 octane	7.00 – 7.125	6.75 – 6.875	6.75 – 6.875
Minimum 70 octane			
64-66, 390 e.p. gasoline	5.625– 5.75	5.625– 5.75	5.625– 5.75
68-70, 350-360 e.p. gasoline	6.125– 6.25	6.125– 6.25	6.125– 6.25
Other districts:			
52-54 naphtha	5.25 – 5.375	5.125– 5.25	5.125– 5.25
54-56 naphtha	5.375– 5.50	5.25 – 5.375	5.25 – 5.375
Motor gasoline:			
U. S. Motor (58-62°)	5.375– 5.50	5.25 – 5.375	5.25 – 5.375
Minimum 60 octane	6.75 – 6.875	6.50 – 6.625	6.50 – 6.625
Minimum 65 octane	7.00 – 7.125	6.75 – 6.875	6.75 – 6.875
Minimum 70 octane			
64-66, 390 e.p. gasoline	5.75 – 5.875	5.75 – 5.875	5.75 – 5.875
68-70, 350-360 e.p. gasoline	6.25 – 6.375	6.25 – 6.375	6.25 – 6.375
California (3c tax to be added to prices if used in state)			
54-58 U.S. Motor, 437 e.p. for in-state shipment	6.50 – 7.50	6.00 – 7.00	6.00 – 7.00
54-58 U.S. Motor, 437 e.p., for outside state shipment	5.00 – 6.00	5.00 – 6.00	5.00 – 6.00
58-61, 375-400 e.p. gasoline, 65 octane and above	7.50 – 8.50	7.50 – 8.50	7.50 – 8.50
†***North Texas*** (F. o. b. Wichita Falls district for shipment to Texas and New Mexico destinations; Group 3 prices quoted on northern shipments).			
U. S. Motor gasoline, by octane numbers:			
62 and below (3rd grade)	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
63-70 octane (regular)	5.25 – 5.375	5.25	5.125– 5.25
71 and above			
60-62, 400 e.p. gasoline	4.625– 4.75	4.625	4.625
64-66, 375 e.p. gasoline	4.75	4.625– 4.75	4.625– 4.75
68-70, 350-360 e.p. gasoline	4.875	4.75 – 4.875	4.75 – 4.875
Kansas (F. o. b. refinery, Kansas destination)			
U. S. Motor gasoline, by octane numbers:			
62 and below (3rd grade)	4.75 – 4.875	4.75	4.50 – 4.75
63-70 octane (regular)	5.625– 5.75	5.625– 5.75	5.375– 5.50
71 and above			
60-62, 400 e.p. gasoline	4.75 – 4.875	4.75 – 4.875	4.625– 4.75
†***West Texas and New Mexico*** (F. o. b. W. Texas and N. Mex. refinery for unrestricted shipment)			
U. S. Motor gasoline, by octane numbers:			
62 and below (3rd grade)	4.625– 4.75	4.50 – 4.625	4.50 – 4.625
63-70 octane (regular)	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375
71 and above			
†***East Texas*** (F. o. b. East Texas refinery for unrestricted shipment)			
U. S. Motor gasoline, by octane numbers:			
62 and below (3rd grade)	4.50 – 4.625	4.50	4.375
63-70 octane (regular)			
71 and above			
60-62, 400 e.p. gasoline	4.625	4.50 – 4.625	4.375– 4.50
North Louisiana (For Louisiana and Arkansas destination)			
U. S. Motor gasoline:			
62 octane and below	5.25	5.25	5.25
63-70 octane number	6.00	6.00	6.00
71 octane and above	*6.25	*6.25	*6.25
Arkansas (For Arkansas and Louisiana destination)			
U. S. Motor gasoline:			
62 octane and below	5.25	5.25	5.25
63-70 octane number	6.00	6.00	6.00
71 octane and above	*6.25	*6.25	*6.25

*Nominal. †Refiners generally receive from 0.25c to 0.5c per gallon more for gasoline and kerosine for local or differential territory shipment.

	May 6	April 29	April 22
Ohio (Quotations of S. O. Ohio. Delivered any point in Ohio).			
U. S. Motor gasoline	8.00	8.00	8.00
Above 65 octane number	8.25	8.25	8.25

Natural Gasoline

(Prices shown f.o.b. Group 3 and Breckenridge represent majority of sales made on dates shown to blenders on the freight basis shown below, although shipments may originate in other manufacturing districts, such as East Texas, Panhandle, Southwest Texas or Kansas).

F.o.b. Group 3			
Grade 26-70	3.125	2.75	2.75
F.o.b. Breckenridge			
Grade 26-70	2.75 – 3.00	2.50 – 2.75	2.50
California (F.o.b. plants in Los Angeles basin)			
75-85, 375-390 e.p., for blending	5.75 – 6.50	5.75 – 6.50	5.75 – 6.50

Kerosine

Western Penna. (Quotations and/or sales prices to car unloaders)			
Bradford-Warren:			
45 w.w. kerosine	4.75 – 4.875	4.75 – 4.875	4.75 – 4.875
46 w.w. kerosine	4.875– 5.00	4.875– 5.00	4.875– 5.00
47 w.w. kerosine	5.00 – 5.125	5.00 – 5.125	5.00 – 5.125
Other districts:			
45 w.w. kerosine	4.75 – 4.875	4.75 – 4.875	4.75 – 4.875
46 w.w. kerosine	4.875– 5.00	4.875– 5.00	4.875– 5.00
47 w.w. kerosine	5.00 – 5.125	5.00 – 5.125	5.00 – 5.125
Ohio (Quotations of S. O. Ohio . Delivered any point in Ohio).			
Kerosine	6.00	6.00	6.00
Oklahoma			
41-43 w.w. kerosine	3.875– 4.00	3.75	3.50 – 3.625
42-44 w.w. kerosine	4.00 – 4.125	3.875– 4.00	3.625– 3.75
Kansas (F.o.b. refinery, Kansas destination)			
41-43 w.w. kerosine	4.00 – 4.125	4.00	3.875– 4.00
42-44 w.w. kerosine	4.125– 4.25	4.125– 4.25	4.00 – 4.125
†***North Texas*** (F.o.b. Wichita Falls district for shipment to Texas and New Mexico destinations; Group 3 prices quoted on northern shipments).			
41-43 w.w. kerosine	3.875	3.75	3.625– 3.75
†***East Texas*** (F.o.b. East Texas refinery for unrestricted shipment)			
41-43 w.w. kerosine	3.625– 3.75	3.50	3.375
North Louisiana (For Louisiana and Arkansas destination)			
41-43 w.w. kerosine	4.125	3.875	3.87
Arkansas (For Arkansas and Louisiana destination)			
41-43 w.w. kerosine	4.375	4.25	4.25
California (F.o.b. California refineries)			
38-40 w.w. kerosine	4.25 – 6.50	4.50 – 6.75	5.00 – 7.00

Gas, Fuel *and* Heating Oils

Western Penna. (Quotations and/or sales prices to car unloaders)			
Bradford-Warren:			
36-40 fuel oil	4.25 – 4.375	4.00 – 4.125	4.00 – 4.125
‡*Other districts:*			
36-40 fuel oil	4.125– 4.25	4.00 – 4.125	4.00 – 4.125
‡Not including Pittsburgh.			
Oklahoma (F.o.b. Oklahoma refineries)			
Heating oils:			
No. 1 white (38-40 grav.)	3.25 – 3.375	3.25	3.25
No. 1 straw (38-40 grav.)	3.125 – 3.25	3.125	3.00 – 3.125
No. 2 straw (32-36 grav.)	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
No. 2 dark (32-36 grav.)	2.75	2.75	2.75
U. G. I. gas oil	2.625	2.625	2.625
Fuel oils: (Prices per barrel)			
28-30, zero	$1.125–$1.15	$1.125–$1.15	$1.125–$1.15
28-30	$1.00 –$1.025	$0.95 –$1.00	$0.95 –$1.00
24-26	$0.75 –$0.775	$0.75 –$0.775	$0.75 –$0.775
18-22	$0.725–$0.75	$0.725–$0.75	$0.725–$0.75
14-16	$0.675–$0.70	$0.675–$0.70	$0.675–$0.70

(*Continued on next page*)

PRICES in the various petroleum markets quoted regularly in National Petroleum News are compiled by the staff of Platt's Oilgram, an affiliated daily oil market reporting service. Prices appearing in each issue of National Petroleum News are the same as those carried in the Monday edition of the Oilgram. For information regarding the Oilgram daily news and market service write Platt's Oilgram, Cleveland.

(*Continued from preceding page*)

	May 6	April 29	April 22
Kansas (F.o.b. refinery, Kansas destination)			
No. 1 straw (38-40 grav.)..	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
18-22 fuel oil (per bbl.)....	$0.85 –$0.90	$0.85 –$0.90	$0.875–$0.90
10-14 fuel oil (per bbl.)....	$0.725	$0.725	$0.70 –$0.725
North Texas (F.o.b. Wichita Falls district for shipment to Texas and New Mexico; Group 3 prices quoted on northern shipments).			
No. 1 straw (38-40 grav.)	3.125– 3.25	3.125– 3.25	3.125– 3.25
No. 1 white (38-40 grav.)	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
No. 2 (32-36 grav.).....	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
U.G.I. gas oil.....	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
24-26 fuel oil (per bbl.)....	$0.80	$0.80	$0.80
18-22 fuel oil (per bbl.)....	$0.675–$0.70	$0.675–$0.70	$0.675–$0.70
West Texas (F.o.b. West Texas refineries for unrestricted shipment).			
No. 2 (32-36 grav.).....	2.625– 2.75	2.625– 2.75	2.625– 2.75
18-22 fuel oil (per bbl.)....	$0.65 –$0.675	$0.65 –$0.675	$0.65 –$0.675
East Texas (F.o.b. East Texas refineries for unrestricted shipment).			
No. 1 white (38-40 grav.)..	3.25	3.25	3.125– 3.25
No. 2 (32-36 grav.).....	2.625– 2.75	2.625– 2.75	2.625– 2.75
U.G.I. gas oil.....	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
24-26 fuel oil.....	$0.60 –$0.625	$0.60 –$0.625	$0.60
20-24 fuel oil.....	$0.60	$0.60	$0.575–$0.60
North Louisiana (For Louisiana and Arkansas destination).			
No. 2 (32-36 grav.).....	3.125– 3.25	3.125– 3.25	3.125– 3.25
U.G.I. gas oil.....	2.875– 3.00	2.875– 3.00	2.875– 3.00
20-24 fuel oil.....	$1.00 –$1.025	$1.00 –$1.025	$1.00 –$1.025
16-20 fuel oil.....	$0.90 –$0.925	$0.90 –$0.925	$0.90 –$0.925
10-14 fuel oil.....	$0.75 –$0.80	$0.75 –$0.80	$0.75 –$0.80
Arkansas (For Arkansas and Louisiana destination)			
No. 2 (32-36 grav.).....	3.50	3.50	3.50
28-30 gas oil, zero.....	3.25	3.25	3.25
20-24 fuel oil (per bbl.)....	$0.825–$0.875	$0.825–$0.875	$0.825–$0.875
16-20 fuel oil.....	$0.725–$0.775	$0.725–$0.775	$0.725–$0.775
10-14 fuel oil.....	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
California			
San Joaquin Valley, per bbl.:			
Grade C fuel oil.....	$0.65 –$0.75	$0.65 –$0.75	$0.65 –$0.75
Diesel fuel oil.....	$1.05 –$1.45	$1.05 –$1.45	$1.05 –$1.45
Stove distillate.....	$1.25 –$1.85	$1.25 –$1.85	$1.25 –$1.85
Los Angeles, per bbl.:			
Grade C fuel oil.....	$0.65 –$0.95	$0.65 –$0.95	$0.65 –$0.95
Diesel fuel.....	$1.05 –$1.45	$1.05 –$1.45	$1.10 –$1.45
Stove distillate.....	$1.25 –$1.85	$1.25 –$1.85	$1.45 –$1.85
San Francisco, per bbl.:			
Grade C fuel oil.....	$1.00	$1.00	$1.00
Diesel fuel.....	$1.68	$1.65	$1.65
Stove distillate.....	$2.10	$2.10	$2.10

Neutral Oils

Western Penna. (Quotations and/or sales prices to car unloaders)

Viscous Neutrals (*Viscosity at 70° F.*)

200 Vis. (180 at 100°) No. 3 color, 420-425 flash:			
0 pour test.....	25.50 –26.00	25.50 –26.00	25.50 –26.00
10 pour test.....	24.50 –25.00	24.50 –25.00	24.50 –25.00
15 pour test.....	24.00 –24.50	24.00 –24.50	24.00 –24.50
25 pour test.....	23.00 –23.50	23.00 –23.50	23.00 –23.50
180 Vis. No. 3 color, 410-415 flash:			
25 pour test.....	21.00 –21.50	21.00 –21.50	21.00 –21.50
150 Vis. No. 3 color, 400-405 flash:			
0 pour test.....	20.50 –21.00	20.50 –21.00	20.50 –21.00
10 pour test.....	19.50 –20.00	19.50 –20.00	19.50 –20.00
15 pour test.....	19.00 –19.50	19.00 –19.50	19.00 –19.50
25 pour test.....	18.00 –18.50	18.00 –18.50	18.00 –18.50

South Texas (F.o.b. South Texas refineries, for domestic shipment)

Pale Oils:			
Vis. Color	(*Viscosity at 100° F.; pour test 0*)		
100 No. 1½-2½.....	5.00	5.00	5.00
200 No. 2-3.....	7.00	7.00	7.00
300 No. 2-3.....	7.50	7.50	7.50
500 No. 2½-3½.....	8.50	8.50	8.50
750 No. 3-4.....	9.00	9.00	9.00
1200 No. 3-4.....	9.50	9.50	9.50
2000 No. 3-4.....	10.00	10.00	10.00
Red Oils:			
200 No. 5-6.....	7.00	7.00	7.00
300 No. 5-6.....	7.50	7.50	7.50
500 No. 5-6.....	8.50	8.50	8.50
750 No. 5-6.....	9.00	9.00	9.00
1200 No. 5-6.....	9.50	9.50	9.50
2000 No. 5-6.....	9.75 – 10.00	10.00	10.00

Note: South Texas red oil prices shown above cover oils with green cast; blue cast red oils are slightly lower in some cases.

Mid-Continent (Viscosity at 100° F.; F.o.b. Tulsa basis. Prices represent quotations and sales).

0 to 10 Pour Point:			
Vis. Color			
60-85.....	5.25	5.25	5.25
86-110.....	5.75	5.75	5.75
150—No. 3.....	10.00	10.00	10.00
Neutral Oils (cont'd.)			
150—No. 4.....	9.50	9.50	9.50
180—No. 3.....	11.25	11.25	11.25
180—No. 4.....	10.75	10.75	10.75
180—No. 5.....	10.25	10.25	10.25
200—No. 3.....	11.75	11.75	11.75
200—No. 4.....	11.25	11.25	11.25
200—No. 5.....	10.75	10.75	10.75
220—No. 3.....	12.75	12.75	12.75
220—No. 4.....	12.25	12.25	12.25
220—No. 5.....	11.75	11.75	11.75
240—No. 3.....	13.75	13.75	13.75
240—No. 4.....	13.25	13.25	13.25
240—No. 5.....	12.75	12.75	12.75
280—No. 3.....	14.75	14.75	14.75
280—No. 4.....	14.00	14.00	14.00
280—No. 5.....	13.50	13.50	13.50
300—No. 3.....	15.25	15.25	15.25
300—No. 5-6.....	13.25	13.25	13.25
15 to 30 Pour Point:			
60-85.....	4.75	4.75	4.75
86-110.....	5.25	5.25	5.25
150—No. 3.....	9.00	9.00	9.00
150—No. 4.....	8.50	8.50	8.50
180—No. 3.....	10.25	10.25	10.25
180—No. 4.....	9.75	9.75	9.75
180—No. 5.....	9.25	9.25	9.25
200—No. 3.....	10.75	10.75	10.75
200—No. 4.....	10.25	10.25	10.25
200—No. 5.....	9.75	9.75	9.75
220—No. 3.....	11.75	11.75	11.75
220—No. 4.....	11.25	11.25	11.25
220—No. 5.....	10.75	10.75	10.75
240—No. 3.....	12.75	12.75	12.75
240—No. 4.....	12.25	12.25	12.25
240—No. 5.....	11.75	11.75	11.75
280—No. 3.....	13.75	13.75	13.75
280—No. 4.....	13.00	13.00	13.00
280—No. 5.....	12.50	12.50	12.50
300—No. 3.....	14.50	14.50	14.50
300—No. 5-6.....	13.00	13.00	13.00

Chicago (F.o.b. Chicago refineries) (Vis. at 100° F.)

Pale Oils, *15 to 30 pour point:			
Vis. Color			
60-85—No. 2.....	6.50	6.50	6.50
86-110—No. 2.....	7.00	7.00	7.00
140—No. 3.....	9.75	9.75	9.75
160—No. 3.....	10.50	10.50	10.50
180—No. 3.....	11.25	11.25	11.25
200—No. 3.....	11.75	11.75	11.75
250—No. 3.....	13.75	13.75	13.75
Red Oils, *15 to 30 Pour Point:			
180—No. 5.....	10.25	10.25	10.25
200—No. 5.....	10.75	10.75	10.75
220—No. 5.....	11.75	11.75	11.75
250—No. 5.....	12.75	12.75	12.75
280—No. 5.....	13.50	13.50	13.50
300—No. 5.....	14.00	14.00	14.00

*Oils with 0 to 10 pour point bring 1c higher than above prices. To obtain prices delivered in Chicago, add 0.25c per gal.

California (F.o.b. California refineries; Viscosity at 100° F.)

All neutral oils, 13.5c per gal. in tank car lots; and 15.5c in iron bbls., to refiners only, excluding federal tax.

Cylinder Stocks

Mid-Continent (F.o.b. Tulsa basis. Prices represent quotations and sales

Bright Stocks:			
190-200 Vis. at 210° D.....	17.00	17.00	17.00
150-160 Vis. at 210° D:			
0 to 10 pour test.....	14.00	14.00	14.00
10 to 25 pour test.....	13.50	13.50	13.50
25 to 40 pour test.....	13.00	13.00	13.00
150-160 Vis. at 210° E....	13.00	13.00	13.00
120 Vis. at 210° D:			
0 to 10 pour test.....	13.75	13.75	13.75
10 to 25 pour test.....	13.25	13.25	13.25
25 to 40 pour test.....	12.75	12.75	12.75
600 Stm. Rfd. Dark Green	5.00 – 6.00	5.00 – 6.00	5.00 – 6.00
600 Stm. Rfd. Olive Green.	6.00 – 7.50	6.00 – 7.50	6.00 – 7.50
631 Steam Refined.....	8.50	8.50	8.50
Black oil.....	3.25	3.25	3.25

Chicago (F.o.b. Chicago district refineries) (Viscosity at 210°)

Unfiltered Steam Refined:			
140.....	9.00	9.00	9.00
160.....	10.00	10.00	10.00
200.....	11.00	11.00	11.00
Bright stocks, 160 vis. at 210 No. 8 color:			
0 to 10 pour point....	15.75	15.75	15.75
15 to 25 pour point....	15.25	15.25	15.25
30 to 40 pour point....	14.75	14.75	14.75
E filtered Cyl. Stock.....	13.50	13.50	13.50

(*Continued on next page*)

REFINERY TANK CAR MARKETS

CONTINUED FROM PRECEDING PAGE

Cylinder Stocks (cont'd)

	May 6	April 29	April 22
Western Penna.	(A.S.T.M. tests; quotations and/or sales prices to car unloaders)		
600 stm. rfd. filterable	7.75 – 8.25	7.50 – 8.00	7.50 – 8.00
650 steam refined	10.00 –10.50	10.00 –10.50	10.00 –10.50
600 flash	11.00 –11.50	11.00 –11.50	11.00 –11.50
630 flash	16.00 –16.50	16.00 –16.50	16.00 –16.50
600 Warren E	12.00 –12.50	12.00 –12.50	12.00 –12.50
Bright stock, 150-160, vis. at 210°, 540-550 flash, No. 8 color:			
10 pour test	18.50 –19.00	18.50 –19.00	18.50 –19.00
15 pour test	17.50 –18.00	17.50 –18.00	17.50 –18.00
20 pour test	16.50 –17.00	16.50 –17.00	16.50 –17.00
25 pour test	15.50 –16.00	15.50 –16.00	15.50 –16.00

Petrolatums

Western Penna. (Per pound, in barrels, carload lots, f.o.b. Penna refinery. In tank cars, 0.5c per pound less. Quotations are from majority of petrolatum makers).

Snow White	6.125	6.125	5.875– 6.00
Lily White	5.125	5.125	4.875– 5.00
Cream White	4.125	4.125	3.875– 4.00
Light Amber	2.50	2.50	2.375– 2.50
Amber	2.25	2.25	2.125– 2.25
Red	1.75 – 1.875	1.75 – 1.875	1.75 – 1.875

Wax

Western Penna. (Per pound, f.o.b. New York)

122-124 wh. crude scale, A.m.p.	2.10 – 2.15	2.10 – 2.15	2.10 – 2.15
124-126 wh. crude scale, A.m.p.	2.15 – 2.20	2.15 – 2.20	2.15 – 2.20

Oklahoma (Per pound in barrels; in a few instances, per pound in burlap bags; f.o.b. Oklahoma refineries)

124-126 wh. crude scale, A.m.p.	2.125– 2.375	2.125– 2.25	2.125– 2.25

Chicago (F.o.b. Chicago district refineries, in cents per pound, in bags, carload lots. Melting points A.S.T.M. method; add 3° F. to convert into A.m.p.)

Fully refined:			
122-124	4.40 – 4.50	4.40 – 4.50	4.40 – 4.50
125-127	4.65 – 4.75	4.65 – 4.75	4.65 – 4.75
127-129	4.80 – 4.90	4.80 – 4.90	4.80 – 4.90
130-132	5.40 – 5.50	5.40 – 5.50	5.40 – 5.50
132-134	5.65 – 5.75	5.65 – 5.75	5.65 – 5.75
135-137	6.40 – 6.50	6.40 – 6.50	6.40 – 6.50

MID-WESTERN TANK CAR MARKETS

Following prices are in cents per gallon, except fuel oil in barrels, in tank car lots, representing majority of sales of products made by Chicago sellers, from legally produced crude to jobbers on Group 3 freight basis, although shipments may originate in other South-western or Mid-western refining districts. Prices do not include state or federal taxes.

Gasoline

U. S. Motor gasoline:	May 6	April 29	April 22
62 octane and below (3rd grade)	4.625– 4.75	4.50 – 4.625	4.50 – 4.625
63-70 octane (regular)	5.25 – 5.50	5.25 – 5.375	5.25 – 5.375
71 octane and above	.....	.....	.....
60-62, 400 e.p.	4.625– 4.75	4.50 – 4.625	4.50 – 4.625
64-66, 375 e.p.	4.75 – 4.875	4.625– 4.75	4.625– 4.75
68-70, 350-360 e.p.	4.875– 5.00	4.75 – 4.875	4.75 – 4.875

Kerosine

41-43 w.w.	3.875– 4.00	3.625– 3.75	3.50 – 3.625
42-44 w.w.	4.00 – 4.125	3.75 – 3.875	3.625– 3.75

Fuel *and* Gas Oils

Domestic:			
No. 1 prime white	3.25 – 3.375	3.125– 3.25	3.125– 3.25
No. 1 straw	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125

•Formerly Chicago Tank Car Markets.

	May 6	April 29	April 22
No. 2 dark	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
No. 2 straw	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
No. 3	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
No. 4, (per bbl.)	$0.875–$0.90	$0.875–$0.90	$0.875–$0.90
No. 5, (per bbl.)	$0.65 –$0.675	$0.675–$0.70	$0.675–$0.70
Industrial.			
•No. 4, (per bbl.)	$0.85 –$0.875	$0.85 –$0.875	$0.85 –$0.875
No. 5, (per bbl.)	$0.625–$0.65	$0.65 –$0.675	$0.65 –$0.675
No. 6, (per bbl.)	$0.50 –$0.55	$0.50 –$0.55	$0.50 –$0.55
U.G.I. gas oil	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625

Naphtha *and* Solvent

Stoddard solvent	6.375	6.375	6.375
V. M. & P. naphtha	6.875	6.875	6.875
Cleaners' naphtha	6.875	6.875	6.875
Mineral spirits	5.875	5.875	5.875
Rubber solvent	6.875	6.875	6.875
Lacquer diluent	7.875	7.875	7.875

DAILY GASOLINE PRICES

Daily range of gasoline prices (cents per gallon) in tank cars, as reported in PLATT'S OILGRAM, Week Ended May 4, 1935

U.S.Motor, 62 octane & below: (3rd grade)	Apr. 29	Apr. 30	May 1	May 2	May 3	May 4
East Texas	4.50	4.50	4.50	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
*North Texas	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
West Texas	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.625– 4.75	4.625– 4.75	4.625– 4.75
Oklahoma	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.625– 4.75	4.625– 4.75	4.625– 4.75
Mid-Western (Group 3 basis)	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625	4.625– 4.75	4.625– 4.75	4.625– 4.75
U. S. Motor, 63-70 octane: (regular)						
East Texas	.....	.....	.....	.....	.....	.....
*North Texas	5.25	5.25	5.25	5.25	5.25 – 5.375	5.25 – 5.375
West Texas	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375
Oklahoma	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375
Mid-Western (Group 3 basis)	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
U. S. Motor, 59 octane & below						
New York harbor	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
Philadelphia district	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
Baltimore district	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
Motor Gasoline, 60-64 octane						
New York harbor	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Philadelphia district	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25
Baltimore district	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
Motor Gasoline, 65 octane & above						
New York harbor	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Philadelphia district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Baltimore district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
U. S. Motor Gasoline						
Bradford-Warren (Western Penna.)	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.37	5.25 – 5.375	5.25 – 5.375
Other districts (Western Penna.)	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375	5.25 – 5.37	5.25 – 5.375	5.25 – 5.375
Motor Gasoline, Minimum 60 octane						
Bradford-Warren (Western Penna.)	6.50 – 6.625	6.625– 6.75	6.625– 6.75	6.625– 6.75	6.75 – 6.875	6.75 – 6.875
Other districts (Western Penna.)	6.50 – 6.625	6.625– 6.75	6.625– 6.75	6.625– 6.75	6.75 – 6.875	6.75 – 6.875
Motor Gasoline, Minimum 65 octane						
Bradford-Warren (Western Penna.)	6.75 – 6.875	6.875– 7.00	6.875– 7.00	6.875– 7.00	7.00 – 7.125	7.00 – 7.125
Other districts (Western Penna.)	6.75 – 6.875	6.875– 7.00	6.875– 7.00	6.875– 7.00	7.00 – 7.125	7.00 – 7.125

*For shipment to Texas and New Mexico destinations; Group 3 prices are quoted on northern shipments.

HIGH VISCOSITY Pale Neutrals

These new High Viscosity Pale Neutrals possess extraordinary characteristics, making them especially desirable for use in compounding motor oils of superior quality. . .Viscosity as high as 600 at 100° F., High Flash, Low Pour, Low Carbon Residue, Excellent Color. They are exclusive products of the world's largest refinery operating exclusively on 100% paraffin base, high gravity crudes.

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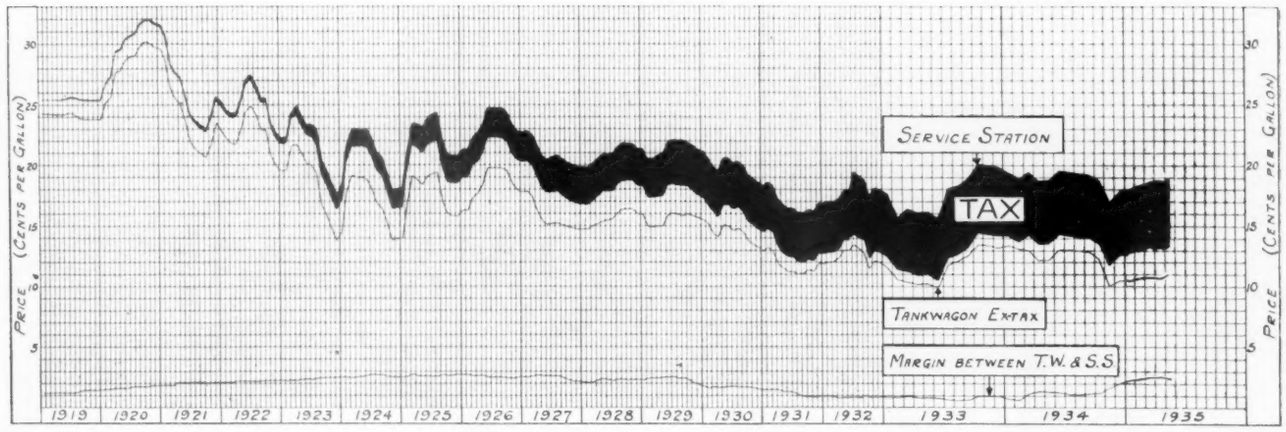
Trend of Gasoline Prices *and* Gasoline Taxes, at 50 Representative Cities



TANK WAGON, SERVICE STATION MARKETS

Tax column includes 1c federal tax, state gasoline tax, also city and county taxes as indicated in footnotes, and inspection fees, as shown in general footnote. These prices in effect May 6, 1935, as posted by principal marketing companies at their headquarters offices, but subject to later corrections.

S. O. New Jersey

Essolene

	Posted Tank Car	Dealer T.W.	Taxes	Posted S.S.	Kerosine T.W.
Atlantic City, N. J.	6.9	8.9	4	17.2	9
Newark, N. J.	6.5	9	4	16.5	7.5
Annapolis, Md.	6.8	9.3	5	17.8	10
Baltimore, Md.	6.3	8.8	5	17.3	8.5
Cumberland, Md.	7.8	10.3	5	18.8	12.7
Washington, D. C.	6.5	9	3	15.5	9.5
Danville, Va.	7.8	10.3	6	19.8	12.9
Norfolk, Va.	6.3	8.8	6	18.3	11.3
Petersburg, Va.	7	9.5	6	19	11.4
Richmond, Va.	7	9.5	6	19	11.7
Roanoke, Va.	8	9.5	6	18	12.9
Charleston, W. Va.	6.8	9.3	5	17.8	12.6
Parkersburg, W. Va.	6.5	9	5	17.5	11.2
Wheeling, W. Va.	7.5	9.75	5	18	12.2
Charlotte, N. C.	8.6	11.1	7	21.6	13.5
Hickory, N. C.	8.9	11.4	7	21.9	13.7
Mt. Airy, N. C.	8.9	11.4	7	21.9	13.8
Raleigh, N. C.	8.4	10.9	7	21.4	13.3
Salisbury, N. C.	8.7	10.25	7	20	13.6
Charleston, S. C.	6.4	8.9	7	19.4	11.3
Columbia, S. C.	8.2	10.7	7	21.2	13.2
Spartanburg, S. C.	8.6	9.75	7	19	13.5

Price basis to undivided dealers: Dealer t.w. price, less 0.5c per gal.

Price basis to commercial consumers: Beginning Feb. 11, 1935, all new commercial consumers will be signed on following differentials over tank car price, on yearly purchases: up to 35,999 gals., 2.5c over t.c.; 36,000 to 119,999 gals., 2c; 120,000 to 239,999 gals., 1.5c; 240,000 to 479,999 gals., 1c; and over 480,000 gals., 0.5c.

Above prices apply only when deliveries are made in lots of 50 or 100 gals. at one time, depending on code region in which deliveries are effected.

If deliveries are made in less than these minimum quantities, s.s. price at time and place of delivery applies.

Non-contract customers will be billed at 2.5c over tank car price at time and place of delivery.

Kerosine Discount: 1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore City contract not necessary) except no discount in state of New Jersey.

Socony-VacuumOilCo., Inc.

(S. O. New York Division)

Socony Mobilgas

	†Posted Dealer T.W.	Taxes	Total † Posted Dealer T.W.	S.S	Kerosine T.W.
Metropolitan N. Y. City:					
Borough of Richmond (Staten Island)	9.25	*5	14.25	*18	8
Boroughs of Manhattan and Bronx	9.25	*5	14.25	*18	7.75
Kings and Queens	9	*5	14	*17.5	7.75
Albany, N. Y.	9.2	5	14.2	17.7	8
Binghamton, N. Y.	10	5	15	18.5	9.25
Buffalo, N. Y.	9.7	5	14.7	18.2	8
Jamestown, N. Y.	9.3	5	14.3	17.8	8
Plattsburg, N. Y.	10.2	5	15.2	18.7	9.5
Rochester, N. Y.	9.7	5	14.7	18.2	8.5
Syracuse, N. Y.	9.5	5	14.5	18	8.75
Danbury, Conn.	9.7	5	12.7	16.2	8.25
Hartford, Conn.	9.3	3	12.3	15.8	8
New Haven, Conn.	9.2	3	12.2	15.7	8
Bangor, Me.	10.1	5	15.1	18.7	9.5
Portland, Me.	9.7	5	14.7	18.2	8.75
Boston, Mass.	9	4	13	16.5	7.5
Concord, N. H.	10.2	5	15.2	18.7	9.25
Lancaster, N. H.	11.45	5	16.45	20.2	9.75
Manchester, N. H.	9.8	5	14.8	18.3	9
Providence, R. I.	9	3	12	15.5	7
Burlington, Vt.	11.2	5	16.2	19.7	9
Rutland, Vt.	11.1	5	16.1	19.6	9

*Plus 2% city sales tax computed at time of each sale.

†Prices are to "split" or "divided" dealers.

Discounts to dealers: thru territory, except New York City, off normal s.s. price, 4c to undivided dealers, and 3.5c to "split" dealers.

Effective May 1, 1935: In New York City, in Boroughs of Kings and Queens, to undivided dealers, 4c; in other boroughs, 4.25c; to split dealers, 0.5c less than to undivided dealers.

To commercial consumers: Effective Feb. 4, 1935, covering yearly purchases, billed at posted tank car price, plus these differentials: 2.5c for delivery of 1,200 to 36,000 gals.; plus 2c, for 36,000 to 120,000 gals.; plus 1.5c for 120,000 to 240,000 gals.; plus 1c for 240,000 to 480,000 gals.; plus 0.5c for 480,000 gals. and over. Those buying less than 1,200 gals. yearly, get retail s.s. price.

Atlantic Refining

Atlantic White Flash Plus Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Philadelphia, Pa.	10	4	14	16	9
Pittsburgh, Pa.	11	4	15	17	10
Allentown, Pa.	10.5	4	14.5	16.5	10
Erie, Pa.	11	4	15	17	9
Scranton, Pa.	11	4	15	17	10
Altoona, Pa.	11	4	15	17	10
Dover, Del.	10.5	4	14.5	16.5	10
Wilmington, Del.	10.5	4	14.5	16.5	9
Boston, Mass.	8.8	4	12.8	16.3	7.5
Springfield, Mass.	9	4	13	14	8
Worcester, Mass.	9.1	4	13.1	16.6	8.5
Fall River, Mass.	9	4	13	16.5	8
Providence, R. I.	8.8	3	11.8	15.3	7
Hartford, Conn.	9.1	3	12.1	15.6	7.5
New Haven, Conn.	9	3	12	r15.5	8
Atlantic City, N. J.	9.7	4	13.7	17.2	9
Camden, N. J.	9	4	13	16.5	8.5
Trenton, N. J.	9.3	4	13.3	16.8	8
Annapolis, Md.	9.3	5	14.3	17.8	9.5
Baltimore, Md.	8.8	5	13.8	17.3	8.5
Hagerstown, Md.	9.8	5	14.8	18.3	10
Richmond, Va.	9.5	6	15.5	19	11.7
Wilmington, N. C.	10.5	7	17.5	19.5	11.4
Brunswick, Ga.	12	7	19	21	*14
Jacksonville, Fla.	10.5	8	18.5	20.5	11.5

Dealer discounts: on Atlantic White Flash Plus gasoline, thru territory, divided dealers, price equal to 3.5c off posted s.s. price; undivided dealers, price equal to 4c off posted s.s. price; authorized dealers contracts previous to Aug. 19, 1933, price equal to 3c less than posted s.s. price, plus 1c rental.

Discounts to commercial consumers: Consumer t.w. accounts billed at full t.w. price, with these discounts, effective Dec. 4, 1934, on yearly purchases: 1800 to 36,000 gals., 1.5c; 36,000 to 120,000 gals., 2c; 120,000 to 240,000 gals., 3c; 240,000 to 480,000 gals., 3.25c; 480,000 gals. and over, 3.5c. Those buying less than 100 gals. get retail s.s. price.

*Georgia kerosine has 1c state tax, not included in above prices.

S. O. Ohio

Sohio X-70 Gasoline

	Total T.W.	Taxes	T.W.	S.S.	Kerosine T.W.
Ohio statewide	11.5	5	16.5	18.5	*12.5

Renown (Third Grade Gasoline)

Ohio statewide	11	5	16	17	....

Counties off statewide gasoline schedule:

Butler, Champaign, Clark, Darke, Greene, Hamilton, Miami, Montgomery and Preble	11.5	5	16.5	18.5	....

Statewide Prices to Resellers & Agents

(On sliding scale basis, reflecting tank car price of 8.25c per gal. for 65-70 octane).

Including taxes	†Undivided Accounts	Divided Accounts	**Authorized Agents
Sohio X-70	15	15.5	15.5
Renown (3rd grade)	14.5	15	14.5

Note: On single deliveries of motor gasolines under 25 gallons, to t.w. consumers, s.s. price applies.

Sales tax: Ohio's 3% sales tax, effective Jan. 27, 1935, is added "where assessable, to regular posted prices", S. O. Ohio says.

*Kerosine prices include 1c state tax. Kerosine t.w. price in Hardin, Portage, Summit and Wyandot counties is 11.5c.

†Excluding authorized agents.

**Excluding 0.5c rental.

Discounts to contract tank wagon consumers only: on all motor gasolines, effective Dec. 1, 1934, off t.w. price, on deliveries per month: 1,000 to 9,999 gals., 1.5c per gal. 10,000 gals. and over, 2.5c. Under 1,000 gals., full t.w. price. Single deliveries of less than 25 gals., full s.s. price.

Discounts on kerosine: to dealers and commercial consumers, 3c per gal. off t.w. price, any quantity.

S. O. Kentucky

Crown Gasoline

Lexington, Ky.	13	6	19	21	12.5
Louisville, Ky.	12	6	18	20	10
Paducah, Ky.	12	6	18	20	8
Covington, Ky.	11.5	6	17.5	19	12.5
Jackson, Miss.	12	7	19	21	*11
Vicksburg, Miss.	12	7	19	21	*14.5

TANK WAGON, SERVICE STATION MARKETS

Tax column includes 1c federal tax, state gasoline tax, also city and county taxes as indicated in footnotes, and inspection fees, as shown in general footnote. These prices in effect May 6, 1935, as posted by principal marketing companies at their headquarters offices, but subject to later corrections.

S. O. Kentucky (Cont'd)

Crown Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Birmingham, Ala.	13	*8	21	23	10
Mobile, Ala.	12	*8	20	22	11
Montgomery, Ala.	13	*9	22	24	*15.5
Macon, Ga.	13	7	20	22	*13
Atlanta, Ga.	11	7	18	20	*12
Augusta, Ga.	12.5	7	19.5	21	*13
Savannah, Ga.	11.5	7	18.5	20.5	*14
Jacksonville, Fla.	10.5	8	18.5	20.5	11.5
Miami, Fla.	10.5	8	18.5	20.5	13.5
Tampa, Fla.	10.5	8	18.5	20.5	12.5
Pensacola, Fla.	11	*9	20	22	11.5

Kyso (Third Grade)

Lexington, Ky.	12	6	18	19.5	....
Louisville, Ky.	11	6	17	18.5	....
Paducah, Ky.	10	6	16	17	....
Covington, Ky.	10.5	6	16.5	17.5	....
Jackson, Miss.	11	7	18	19.5	....
Vicksburg, Miss.	10.5	7	17.5	19	....
Birmingham, Ala.	12.5	*8	20.5	22	....
Mobile, Ala.	10.5	*8	18.5	20	....
Montgomery, Ala.	11	*9	20	21	....
Atlanta, Ga.	8.5	7	15.5	17	....
Augusta, Ga.	10.5	7	17.5	18	....
Macon, Ga.	12.5	7	19.5	21	....
Pensacola, Fla.	9.5	*9	18.5	20	....

Dealer Discount: off posted s.s. price, on Crown and Crown Ethyl gasolines to "undivided" dealers 4c; on Kyso, 3c. To "divided" dealers: Crown and Ethyl, 3.5c, and Kyso, 2.5c, all effective on or about Jan. 1, 1934.

Discounts to tank wagon consumers: all single deliveries of 25 gals. or less, get posted s.s. price; all single deliveries of 25 gals. or more, to be billed at posted t.w. price, plus following discounts, off posted t.w. price: Ethyl and Crown gasoline, 25 to 2,999 gals. monthly, 1.5c; Kyso, 1c; 3,000 to 24,999 gals., Ethyl and Crown, 2c; Kyso, 1.5c; 25,000 gals. or more, Ethyl and Crown, 3c; and Kyso, 2.5c.

**Taxes*: in the tax column is included these city and county gasoline taxes at the following points; Birmingham, 1c city; Mobile, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Mississippi kerosine prices include 1c state tax Montgomery kerosine price includes ½c city tax.

S. O. Indiana

Standard Red Crown Gasoline

Chicago, Ill.	11.2	4	15.2	17.2	9
Decatur, Ill.	11.2	4	15.2	17.2	9.5
Joliet, Ill.	11.2	4	15.2	17.2	9.5
Peoria, Ill.	11.2	4	15.2	17.2	9.5
Quincy, Ill.	11	4	15	17	9.3
Indianapolis, Ind.	12.1	*5	17.1	19.1	‡14.2
Evansville, Ind.	11.9	*5	16.9	18.4	‡14
South Bend, Ind.	12.3	*5	17.3	19.3	‡12
Detroit, Mich.	12.7	4	16.7	18.7	9.1
Grand Rapids, Mich.	12.6	4	16.6	18.6	13.3
Saginaw, Mich.	12.8	4	16.8	18.8	15.5
Green Bay, Wisc.	11.9	5	16.9	18.9	10.2
Milwaukee, Wisc.	11.5	5	16.5	18.5	9.8
La Crosse, Wisc.	11.6	5	16.6	18.6	9.9
Minneapolis, Minn.	11.6	4	15.6	17.6	9.9
Duluth, Minn.	12	4	16	18	10.3
Mankato, Minn.	11.6	4	15.6	17.6	9.9
Des Moines, Iowa	11	4	15	17	9.3
Sioux City, Iowa	11.2	4	15.2	17.2	9.5
Davenport, Iowa	11.2	4	15.2	17.2	9.5
Mason City, Iowa	11.4	4	15.4	17.4	9.7
St. Louis, Mo.	10.9	†4	14.9	16.9	7.6
Kansas City, Mo.	10.6	†4	14.6	16.6	7.6
St. Joseph, Mo.	10.6	†4	14.6	16.6	8.9
Fargo, N. Dak.	12.6	4	16.6	18.6	10.9
Minot, N. Dak.	13.8	4	17.8	19.8	12.1
Huron, S. Dak.	12.1	*5	17.1	19.1	10.4
Wichita, Kans.	10.1	4	14.1	13.9	6

Note: Kerosine s.s. prices are generally 3c above normal t.w. price.

Stanolind Gasoline (Third Grade)

Decatur, Ill.	10.2	4	14.2	15.6	....
Peoria, Ill.	10.2	4	14.2	14.2	....
Evansville, Ind.	10.9	*5	15.9	17.7	....
Indianapolis, Ind.	11.1	*5	16.1	17.9	....
Des Moines, Iowa	8.3	4	12.3	16	....
Detroit, Mich.	10.5	4	14.5	16.5	....
Grand Rapids, Mich.	10.9	4	14.9	16.9	....
Saginaw, Michigan	12.1	4	16.1	17.1	....
Duluth, Minn.	11	4	15	16.8	....

S. O. Indiana (Cont'd)

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Huron, S. D.	11.1	*5	16.1	17.9	....
Wichita, Kans.	7.4	4	11.4	12	....

†St. Louis, Kansas City and St. Joseph prices include 1c city tax. ‡Includes 4c state tax.

*South Dakota gasoline and kerosine prices include 0.1c for sales tax. Indiana t.w. and s.s. gasoline prices include 0.2c for chain store tax.

Discounts: Effective Dec. 1, 1934, thru territory except Michigan, effective Apr. 1, 1935, maximum discounts to controlled and uncontrolled dealers and undivided gasoline accounts, off s.s. price at normal points, Ethyl and Red Crown gasoline, 3.5c; Stanolind 2.5c; at points where prices are more than 1c subnormal, 0.5c less. Divided gasoline accounts get 0.5c less per gallon. In case of lease and agency and AAA accounts, the above discounts include the 0.5c per gal. rental allowance.

Discounts to commercial consumers: effective Jan. 1, 1935, thru territory, including Chicago, except Michigan effective Feb. 1, on purchases per month, discount off t.w. price; all gasolines, 25 to 1,000 gals., at t.w. price; 1,000 gals. or more, 1.5c off t.w. on Ethyl and Red Crown, and 0.5c on Stanolind. Purchases of less than 25 gals. get regular s.s. price.

S. O. Nebraska

Standard Red Crown Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Omaha, Neb.	11.6	6	17.6	19.6	10.1
McCook, Neb.	12.3	6	18.3	20.3	10.8
Norfolk, Neb.	12	6	18	20	10.5
North Platte, Neb.	12.4	6	18.4	20.4	10.1
Scottsbluff, Neb.	13.1	6	19.1	21.1	11.6

Reliance Gasoline (Third Grade)

Omaha, Neb.	10.4	6	16.4	16.4	....
McCook, Neb.	11.3	6	17.3	18.8	....
Norfolk, Neb.	11	6	17	19	....
North Platte, Neb.	11.4	6	17.4	19.4	....
Scottsbluff, Neb.	12.1	6	18.1	20.1	....

Discount to dealers: where service station gasoline prices are normal, resellers' allowance off service station prices are (*Maximum* over-all, including rent) as follows: Reliance, 2½c; Standard Red Crown, and Red Crown Ethyl, 3½c. Where service station gasoline prices are below normal, resellers' allowances are reduced one-half of the amount below normal, down to the following (*Minimum* over-all including rent): Reliance, 2c, Standard Red Crown and Red Crown Ethyl 3c.

Discounts to consumers: for tank wagon deliveries covered only by Standard Commercial Consumer Contract, effective January 1, 1935.

S. O. Louisiana

Essolene

	Posted Tank Car	Dealer T.W.	Taxes	Posted S.S.	Kerosine T.W.
Little Rock, Ark.	6.5	9	7.5	20	10
Alexandria, La.	6.5	9.5	*8	21	*10
Baton Rouge, La.	7	9.5	*7	20	*12
New Orleans, La.	7	9.5	*8	21	*13
Lake Charles, La.	7	10	*8	21.5	*12
Shreveport, La.	6	9	*7	19.5	*12
Lafayette, La.	7	10	*8	21.5	*12
Bristol, Tenn.	8.3	10.3	8	21.3	14
Chattanooga, Tenn.	8.5	11	8	22.5	11
Knoxville, Tenn.	9	11.5	8	23	13.5
Memphis, Tenn.	7	9.5	8	21	10.5
Nashville, Tenn.	8	10.5	8	22	13

*Baton Rouge and Shreveport gasoline tax includes 5c state tax, 1c federal tax, and 1c parish tax; Alexandria, Lake Charles, Lafayette and New Orleans, 2c parish tax. Louisiana kerosine prices include 1c state tax; New Orleans kerosine includes also 1c parish tax.

Price basis to dealers: Undivided dealers get dealer price, less 0.5c.

Price basis to commercial consumers: Effective Feb. 11, 1935, commercial consumers not under contract will be billed at 2.5c per gal. above posted bulk plant tank car price at time and place of delivery in lots of 50 gals. or more at one time. Contract customers will be billed at following differentials over tank car price, on yearly purchases: up to 35,999 gals., 2.5c over tank car price; 36,000 to 119,999 gals., 2c over; 120,000 to 239,999 gals. 1.5c; 240,000 to 479,999 gals., 1c; 480,000 gals. and over, 0.5c.

On single deliveries to all classes of commercial consumers, of less than 50 gals., s.s. price at time and place of delivery applies.

Magnolia Petroleum

Mobilgas

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Muskogee, Okla.	11	5	16	18	6
Oklahoma City.	11	5	16	18	8
Tulsa, Okla.	11	5	16	18	8
Fort Smith, Ark.	9.5	†5	14.5	18	8
Little Rock, Ark.	9.5	7.5	17	20.5	8
Texarkana, Ark.	10.5	*5	15.5	17.5	7
Dallas, Tex.	9	5	14	16	8
Ft. Worth, Tex.	9	5	14	16	7
Houston, Tex.	10	5	15	17	8
San Antonio, Tex.	10	5	15	17	8
El Paso, Tex.	12	5	17	19	10
Santa Fe, N. M.	13.5	**7	20.5	22.5	13
Roswell, N. M.	12.5	††6.5	19	21	10

Metro Gasoline (Third Grade)

Muskogee, Okla.	8	5	13	15	....
Oklahoma City.	8	5	13	15	....
Tulsa, Okla.	8	5	13	15	....
Fort Smith, Ark.	9	5	14	16.5	....
Little Rock, Ark.	9	7.5	16.5	19	....
Texarkana, Ark.	8.5	5	13.5	15.5	....
Dallas, Tex.	5	5	10	12	....
Ft. Worth, Tex.	5	5	10	12	....
Houston, Tex.	8	5	13	15	....
San Antonio, Tex.	6	5	11	13	....
El Paso, Tex.	10	5	15	17	....
Santa Fe, N. M.	11.5	**7	18.5	20.5	....
Roswell, N. M.	10.5	††6.5	17	19	....

*In Texarkana, 4c Texas tax applies; outside Texarkana, 6.5c Arkansas tax applies.

†In Fort Smith, 4c Oklahoma tax applies outside Fort Smith, 6.5c Arkansas tax applies.

**Includes 1c city tax.

††Includes 0.5c city tax.

Note: *Price basis to dealers* off s.s. price in t.w., bulk or bbl. deliveries, on Mobilgas and Ethyl, normally: to 100% dealers, 4c; to divided dealers, 3.5c. On Metro gasoline in Texas, Oklahoma and New Mexico: to 100% dealers, 3c; to divided dealers, 2.5c. On Metro, in Arkansas and Louisiana: to 100% dealers, 3.5c; to divided dealers, 3c.

Price basis to consumers: All grades of gasoline invoiced at consumer's t.w. price, which normally is 2c less than s.s. price, less following contract quantity discounts at end of month, on monthly purchases: thru Texas, Oklahoma and New Mexico: 3,001 to 10,000 gals., Mobilgas and Ethyl, 1c, Metro, 0.5c; 10,001 gals. and over, Mobilgas and Ethyl, 2c, Metro, 1c; 25 to 3,000 gals., no discount. Thru Arkansas and Louisiana, on Mobilgas and Ethyl, following basis will apply, on an estimated monthly consumption, differentials figured over posted tank car delivered price: 50 to 3,000 gals., 2.5c over; 3,001 to 10,000 gals., 2c; 10,001 to 20,000 gals., 1.5c; 20,001 to 40,000 gals., 1c; 40,001 gals. or more, 0.5c per gal. over. Deliveries are 25 gals. or more in Texas, Oklahoma, and N. Mex., and 50 gals. or more in Ark. and La.

Continental Oil

Conoco Bronze Gasoline

Denver, Colo.	13	5	18	20	11
Pueblo, Colo.	12	5	17	19	13
Grand Junc., Colo.	15.5	5	20.5	22.5	15
Casper, Wyo.	13.5	5	18.5	20.5	11.5
Cheyenne, Wyo.	13.5	5	18.5	20.5	13
Billings, Mont.	16	6	22	24	16.5
Butte, Mont.	15	6	21	23	17.5
Great Falls, Mont.	13.5	6	19.5	21.5	17.5
Helena, Mont.	17	6	23	25	17.5
Salt Lake City, Utah.	16	5	21	23	16
Boise, Ida.	16.5	6	22.5	24.5	18
Twin Falls, Ida.	16.5	6	22.5	24.5	18
Albuquerque, N. M.	13.5	†6.5	20	22	13

(Continued on next page)

Above prices include these inspection fees on both gasoline and kerosine, per gallon, figured on basis of 50 gallons per barrel:

Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/2c per gal. in a single barrel; 3/10c per gal. in lots of 2 to 10 bbls., 1/5c for 10 to 50 bbls., 2/25c for over 50 bbls.; Kansas, 1/50c, (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 1/25c; Missouri, 3/100c; Nebraska, 3/100c; Nevada, gasoline, 1/20c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. in lots of more than 50 bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee 2/5c; and Wisconsin, 1/25c.

Kerosine inspection fee only: Iowa, 2/25c; Michigan, 4/5c per gal. for first 2 bbls.; 3/5c for next 3; 2/5c for next 5; 3/10c for next 15, and 1/5c per gal. in lots over 25 bbls.

TANK WAGON, SERVICE STATION MARKETS

Tax column includes 1c federal tax, state gasoline tax, also city and county taxes as indicated in footnotes, and inspection fees, as shown in general footnote. These prices in effect May 6, 1935, as posted by principal marketing companies at their headquarters offices, but subject to later corrections.

Continental Oil (Cont'd)

Demand (Third Grade)

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Denver, Colo.	11	5	16	18	....
Cheyenne, Wyo.	11.5	5	16.5	18.5	....
Helena, Mont.	15	6	21	23	....
Salt Lake City, Utah.	14	5	19	21	....
Boise, Ida.	14.5	6	20.5	22.5	....
Albuquerque, N. M.	11.5	†6.5	18	20	....

†Includes city tax of 0.5c.

Discounts: effective March 1, 1934, on gasolines, thru territory, off s.s. price: to "undivided" dealers: Ethyl and Conoco Bronze, 4c; Demand, 3c; to "divided" dealers: Ethyl and Conoco Bronze, 3.5c; Demand, 2.5c.

S. O. California

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Standard Gasoline					
San Francisco, Cal.	12.5	4	16.5	18.5	11.5
Los Angeles, Cal.	12	4	16	18	10.5
Fresno, Cal.	13	4	17	19	12
Phoenix, Ariz.	14	6	20	22	†18
Reno, Nev.	14	5	19	21	13
Portland, Ore.	13	6	19	21	13.5
Seattle, Wash.	13	6	19	21	13.5
Spokane, Wash.	16	6	22	24	16.5
Tacoma, Wash.	13	6	19	21	13.5
Flight Gasoline (Third Grade)					
San Francisco, Cal.	10.5	4	14.5	16.5	....
Los Angeles, Cal.	10	4	14	16	....
Fresno, Cal.	11	4	15	17	....
Reno, Nev.	12	5	17	19	....
Phoenix, Ariz.	12	6	18	20	....
Portland, Ore.	11	6	17	19	....
Seattle, Wash.	11	6	17	19	....
Spokane, Wash.	14	6	20	22	....
Tacoma, Wash.	11	6	17	19	....

†Includes 5c state tax.

Discounts: on gasoline: on Stanavo Aviation, Standard Ethyl, and Standard gasolines, to 100% dealers, 2c below t.w. price; on Flight, 1c per gal. below t.w. To "split" dealers, all brands gasoline 1c below t.w.

On kerosine: tank car delivery, 3.5c off t.w. price to all classes of trade; transport truck and trailer deliveries, 3.5c below t.w. to resellers; plant deliveries to jobbers, 3c below t.w.

Canada

Prices of Imperial Oil Ltd.

Per Imperial Gallon, which is 1.2 U. S. Gallons

Imperial Three Star Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Hamilton, Ont.	16	6	22	25	17.5
Toronto, Ont.	16	6	22	25	17.5
Brandon, Man.	23.3	7	30.3	33.3	21.8
Winnipeg, Man.	21.7	7	28.7	31.7	20.2
Regina, Sask.	23	7	30	33	21.5
Saskatoon, Sask.	25.8	7	32.8	35.8	24.3
Edmonton, Alta.	25.2	7	32.2	35.2	23.7
Calgary, Alta.	22.5	7	29.5	32.5	21
Vancouver, B. C.	20	7	27	30	24
Montreal, Que.	18	6	24	27	17
St. John, N. B.	18	8	26	30	19.5
Halifax, N. S.	18	8	26	30	19.5

Discount to dealers and A.R.D. Accounts:

On gasoline, effective May 14, 1934: in Maritime Provinces, all dealers get 4c off s.s. price; in all other provinces, open dealers get 3c off s.s. price and 1c additional to 100% accounts.

Aviation Gasoline

Following are tank car and/or tank wagon prices of aviation gasoline in principal marketing territories (Stanavo aviation in all territories except Continental Oil and Magnolia Pet. Co.) Tax column includes 1c federal tax, and state tax; also municipal taxes as indicated in footnotes.

Effective April 29, 1935

S. O. New Jersey

	Tank Car	T.W.
Bayonne, N. J.	9.5	12
Baltimore, Md.	9.5	12

Aviation Gasoline

(Continued)

	T.W.
Washington, D. C.	12.6
Richmond, Va.	13.5
Greensboro, N. C.	14.9
Raleigh, N. C.	14.6
Charleston, W. Va.	14.2
Colonial Beacon Oil Co.	
Brooklyn, N. Y.	12.8
Buffalo, N. Y.	13.7
Boston, Mass.	13.5
S. O. Pennsylvania	
Philadelphia, Pa.	14.1
Pittsburgh, Pa.	14.9

	Tank Car
S. O. Louisiana	
F.O.B. Tulsa	8.5

All above prices do not include state or federal taxes.

Note: S.s. prices in above four territories are generally 6c over t.w. prices. Following discounts apply for t.w. deliveries, on monthly purchases, off t.w. price: 3,000 to 10,000 gals., 0.5c; 10,000 to 20,000 gals., 1c; 20,000 to 40,000 gals., 1.5c; and over 40,000 gals., 2c. Consumer t.w. price is generally tank car price, plus freight, plus 2.5c per gal.

	T.W.	Tax	Total T.W.
S. O. Ohio			
Thru Ohio: (To Commercial Consumers) Stanavo Ethyl Aviation (73 Octane):	15.5	5	20.5
S. O. Indiana			
Chicago, Ill.	13.6	4	17.6
Indianapolis, Ind.	14.5	5	19.5
Detroit, Mich.	15.1	4	19.1
Milwaukee, Wisc.	13.9	5	18.9
Minneapolis, Minn.	14	4	18
St. Louis, Mo.	13.3	3	16.3
Kansas City, Mo.	13	*4	17
Fargo, N. D.	15	4	19
Huron, S. D.	**14.5	5	19.5
Wichita, Kans.	12.5	4	16.5
Magnolia Petroleum			
Dallas, Tex.	13	5	18

Discounts: For delivery on contract to hangar operators and resellers: 2c below commercial consumer posted t.w. price.

*Includes 1c city tax.
**Includes 0.1c to cover sales tax.

	Tank Car
Humble Oil & Refining Co.	
Baytown, Tex. (exclusive of taxes)	8.2

	T.W.	Tax	Total T.W.
Continental Oil Co.			
Denver, Colo.	16	5	21
Cheyenne, Wyo.	16.5	5	21.5
Helena, Mont.	20	6	26
Salt Lake City, Utah.	19	5	24
Albuquerque, N. M.	16.5	*6.5	23
S. O. California			
Phoenix, Ariz.	14.3	6	20.3
Los Angeles, Cal.	12.3	4	16.3
San Francisco, Cal.	12.2	4	16.2
Reno, Nev.	13.5	5	18.5
Portland, Ore.	14.7	6	20.7
Seattle, Wash.	15.4	6	21.4
Spokane, Wash.	17	6	23

*Includes city tax of 0.5c.

Note: For discounts, etc., see note under Standard and Flight gasoline above.

Naphtha

Effective May 6, 1935

(In Tank Wagon or Steel Barrels; in Cents per Gallon)

	Mineral Spirits	V.M.&P. Naphtha	Cleaner Naphtha	*Solvent
Altoona, Pa.	....	....	....	17
Baltimore	....	....	....	†14
Boston	17	17	16	17
Bridgeport	....	....	....	13.5
Buffalo (net)	....	....	....	14
Chicago	13.7	15	15	15
Detroit	†17.4	†17.6	†18.6	17.5
Kansas City	14	15.6	16.4	19.3
Lancaster, Pa.	....	....	....	17
Milwaukee	19.5	†21.1	21.9	18.5
Minneapolis	†19.8	†21.3	†22.1	†15.9
Newark, N. J.	....	....	....	12
New York City	13	13	15	12
Philadelphia	13.5	15	16	13.5
Providence	....	....	....	15
Rochester (net)	....	....	....	†14
St. Louis	14.7	16.3	17.1	13
Syracuse	....	....	....	16

Petroleum Spirits (Solvent)

In Tank Cars (F.o.b. refinery or seaboard terminal)	
New York Harbor	9
Philadelphia district	9
Providence	9

Note: 2c off above t.w. prices to large buyers in some instances.

*In the East, prices apply on product generally known as Petroleum Spirits; in the middlewest, prices apply on Stanosol (S. O. Indiana grade of Stoddard Solvent).

†At the following points, these taxes and/or discounts apply on the products specified: Baltimore, solvent, 2c discount if under contract, and 3c discount for 200 gals. or more, with 1c premium on steel bbls.; Detroit, first three products include 3c state tax, prices applying on 150 gals. or more, with prices 1c higher for less than 150 gals.; Milwaukee, V.M.&P. price includes 4c state tax; Minneapolis, first 3 products include 3c state tax; price for solvent for less than 100 gals. is 1c higher; Rochester, 3c discount for deliveries of 150 gals. and over.

Latest Changes

From April 30 to May 6 inclusive. Dates and amounts of changes shown. See table for full current prices. Changes are on gasoline unless kerosine is indicated.

Standard of New York:

Thru territory, s.s. up 0.2c, except western New York, including Buffalo, Binghamton, Jamestown, Rochester and Syracuse unchanged, May 6.

Atlantic Refining:

Camden, t.w. up 0.1c, s.s. up 4c, Apr. 30.

Atlantic City, t.w. up 0.3c, s.s. up 0.8c, Apr. 30.

Standard of Indiana—Red Crown and Stanolind:

Thru territory, up 0.3c, May 2.

Wichita, Red Crown s.s. cut 2.2c, Stanolind cut 0.9c, May 1.

Standard of Nebraska—Red Crown and Reliance:

Thru territory, up 0.3c, except Reliance at Omaha up 1.4c, May 3.

Standard of Louisiana:

Thru Louisiana, up 0.5c, except Baton Rouge and New Orleans unchanged, May 2.

Magnolia Petroleum—Mobilgas:

Dallas, cut 1c, May 1.

(Continued on next page)

Tank Wagon Markets

Latest Changes

(Continued from preceding page)

Ft. Smith, up 0.5c, May 1.
San Antonio, cut 1c, May 1.
Little Rock, up 0.5c, May 1.
Texarkana, up 0.5c, May 1.

Metro:

Dallas, cut 2c, May 1.
San Antonio, cut 3c, May 1.
Ft. Smith, up 0.5c, May 1.
Little Rock, up 0.5c, May 1.
Texarkana, up 0.5c, May 1.
Ft. Worth, kerosine cut 1c, May 1.

Corrections

Notation of amount of change and dates not previously shown in table. Table in this issue is corrected to show these changes. Changes are on gasoline unless kerosine is indicated.

S. O. New York:

Boston, dealer t.w. up 1.5c, s.s. 3c, Apr. 26.

Atlantic Refining:

Boston, s.s. up 2c, Apr. 27.
Worcester, s.s. up 2c, Apr. 27.

Standard of Nebraska:

Scottsbluff, Red Crown—s.s. up 0.4c and Reliance t.w. up 1.4c, s.s. up 3.4c, Apr. 29.

Magnolia Petroleum:

Ft. Worth, cut 1c, Apr. 29.

Commodity Exchange

New York, May 6.—Gasoline trading was light on the Commodity Exchange last week. Total trading for the week was only 15 lots, a total of 630,000 gallons. On two days there were no sales. Price fluctuations were narrow. No crude sales were made during the week.

Gasoline Futures

Week ended May 4, 1935

Month	High	Low	Close
June	6.00	5.91	*5.95
July	5.93	5.92	6.00–6.04
August	5.98	5.94	*6.05
Sept.	6.05	6.05	*6.12
Dec.	6.27	6.24	*6.25

*Nominal.

Note: Gasoline trading in 1000-barrel units: U. S. Motor 55-59 octane, deliverable from Exchange license storage in Houston-Galveston (Texas) area. Crude oil trading in 2000-barrel units: Oklahoma-Kansas, 36-36.9 gravity legally produced oil, deliverable from Exchange licensed storage in Houston-Galveston area and Cushing-Drumright (Okla.) area. Deliveries of other grades of gasoline and crude subject to premiums or discounts set forth in Exchange by-laws.

New Fuel Oil Schedule

NEW YORK, May 6.—Effective June 1, Socony-Vacuum Oil Co. will put into effect its new schedule of retail fuel oil prices over its territory.

Tank car prices at ocean terminals and bulk plants will be based on the cargo price at the Gulf, plus transportation and handling costs. Retail prices will be based 2 cents above normal tank car prices, with a guaranteed top-price of 1.5 cents higher. The usual quantity discount schedule also will prevail.

A bona-fide jobber, hauling from Socony's bulk terminals, will be charged 0.25 cent a gallon for the use of such facilities. Tank truck dealers, with no storage, will be charged 0.5 cent above the terminal tank car price.

Barge buyers will pay 0.125 cent below the normal terminal tank car price.

It is understood that when determining the ocean terminal tank car prices, Socony will allow 0.75 cent for transportation and throughput costs.

S. O. Indiana Again Raises Retail Gasoline Prices

CHICAGO, May 6.—Keeping pace with the improvement noted in refinery tank car markets, retail gasoline price structures, sub-normal as well as normal, were advanced 0.3 cent May 2 throughout Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, North and South Dakota by Standard of Indiana.

The May 2 advance marked the third similar rise in retail prices throughout the Standard Indiana territory in less than two months. The Indiana company announced, as it did coincident with the two previous advances, that the increase was occasioned by the continued improvement in wholesale markets.

Previous advances were on March 22 and April 12.

Virginia Oil Men to Convene

CLEVELAND, May 6.—The annual convention of the Virginia Oil Men's Association will be held in Roanoke, May 23-24. Speakers will discuss new legislation, truck regulation by Congress, and the chain filling station taxes, it has been announced. Entertainment and the usual banquet have been arranged and the ladies are invited.

New Plant in Fitts Pool

TULSA, May 4.—The first gasoline absorption plant for the John Fitts field in Pontotoc county will be constructed by J. E. Crosbie, Inc., according to announcement here. Equipment will be moved in from the Lovell field of Logan county.

J. L. Thayer Dead

TORONTO, May 7.—J. L. Thayer, founder and president of Thayer's Limited, operating a chain of service stations in southwestern Ontario, died at London, Ont. Headquarters of the company are at that point.

Industry's Safety Record Still on the Upgrade

NEW YORK, May 4.—An increase of 10 per cent in injury frequency, a decrease of 11 per cent in injury severity, and a decrease of 17 per cent in the frequency of fatal injuries is shown by the Annual Summary of Injuries in the Petroleum Industry for 1934, issued by the American Petroleum Institute. The greatest results so far attained from the constructive accident prevention work within the industry are shown by this summary.

The progress of the work is more evident by comparison with figures going back to 1927. Fatalities have had a steady decline since 1928, dropping from 76.3 to 42.1 per 100,000 workers. Frequency, expressed as the number of disabling injuries per 1,000,000 man hours worked, was 31.1 in 1927, reached a minimum of 12.3 in 1932, and increased to 14.3 in 1934. The severity of injuries as measured by the number of days lost per 1000 man hours worked dropped from 2.69 in 1928 to 1.69 in 1934.

Splitting the disabling injuries among the various departments, the percentage reduction in frequency since 1927 was 72 per cent for pipelines, 54 per cent for natural gasoline, 51 per cent for producing, 30 per cent in marketing, 55 per cent in refining, and 25 per cent in the marine department. The reduction in all departments was 54 per cent.

Since 1930 the frequency has been less than the average of all industries. Although figures are not available yet for this comparison in 1934 it is expected that the industry's favorable position will be maintained.

The severity of injuries has been greater than the average of all industries since 1927 but in this also the report states there is a probability of a reduction below the average in 1934.

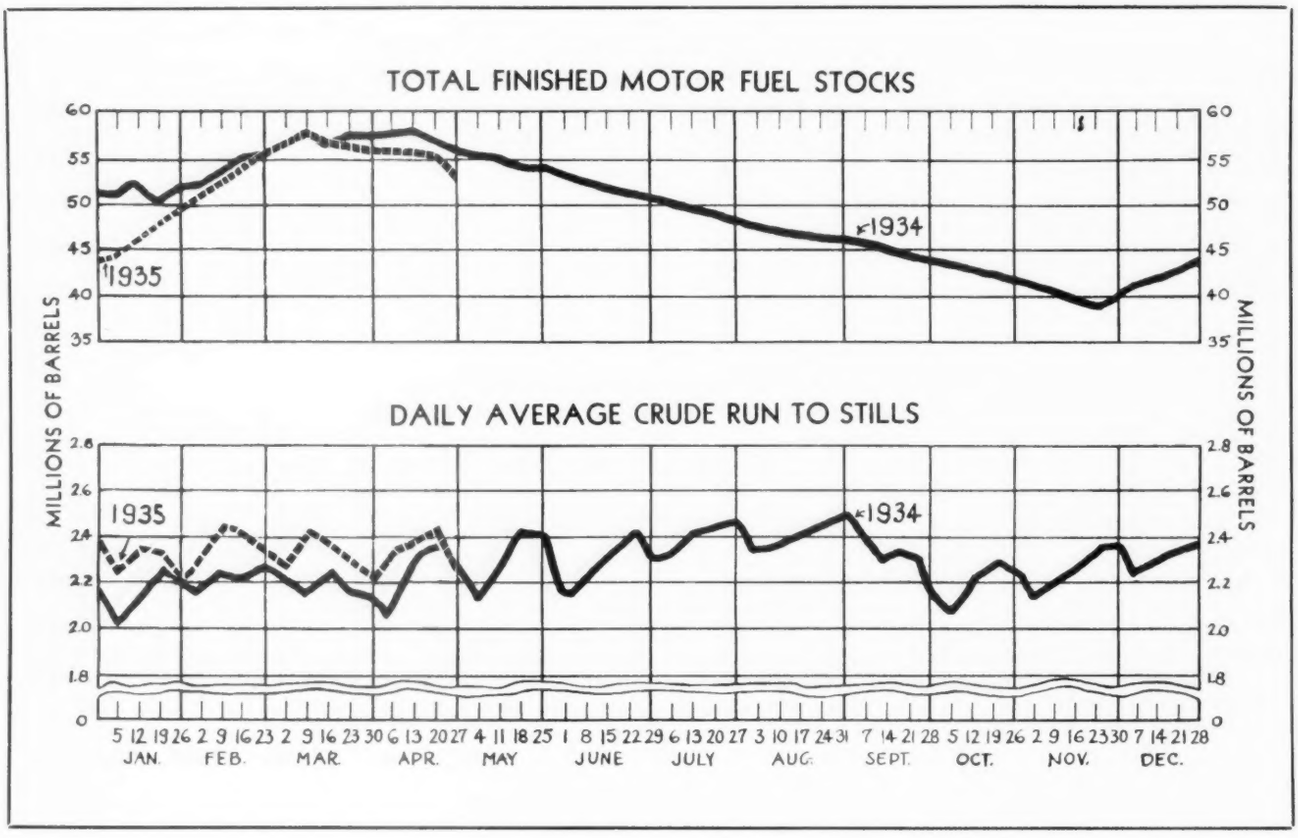
The cause for the increase in injury frequency was attributed to the adjustment of forces, the addition of men, and the consequent problems of supervision under NRA working schedules.

The report shows the details of each company reporting, with figures for all departments and for the separate departments in addition to the summaries.

Petitions for Reorganization

CHICAGO, May 7.—A petition for reorganization under Sec. 77B has been filed with the U. S. district court of Illinois by the Viscosity Oil Co. Hearing has been set for May 29 in Chicago. Claims of all creditors and stockholders must be filed with the Special Master before May 31, 1935.

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.


TOTAL FINISHED MOTOR FUEL STOCKS
MILLIONS OF BARRELS
1935
1934
DAILY AVERAGE CRUDE RUN TO STILLS
MILLIONS OF BARRELS
1935
1934
5 12 19 26 2 9 16 23 2 9 16 23 30 6 13 20 27 4 11 18 25 1 8 15 22 29 6 13 20 27 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 7 14 21 28
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Crude Runs Reduced 162,000 Barrels Daily

NEW YORK, May 7

A DECLINE of 1,791,000 barrels in motor fuel stocks was reflected the week ended May 4, when stocks stood at 63,899,000 barrels, as compared with the revised figure of 65,690,000 barrels for the week ended April 27, the American Petroleum Institute reports.

Total finished motor fuel stocks decreased 1,920,000 barrels, to 53,022,000 barrels on May 4. All districts but two showed decreases, ranging from 62,000 barrels in the Appalachian district to 833,000 barrels in the East Coast. Sizeable decreases in other districts were: 439,000 barrels in the Texas Gulf; 318,000 in California; 209,000 barrels in Oklahoma-Kansas-Missouri; 168,000 barrels in Indiana-Illinois-Kentucky. Stocks in Rocky Mountain district increased 124,000 barrels.

Refinery stocks of motor fuel declined 1,804,000 barrels, to 34,782,000 barrels on May 4. In-transit and terminal stocks declined 116,000 barrels, to 18,240,000 barrels. Unfinished gasoline stocks gained 29,000 barrels, to 5,977,000 barrels, and stocks of other motor fuel gained 100,000 barrels, to 4,900,000 barrels. These changes are over revised stock figures for April 27.

Crude runs to stills decreased 162,000 barrels, to 2,267,000 barrels daily average. These decreases ranged from 4 barrels in Inland Texas to 51,000 barrels at East Coast plants. Two districts reported slight gains. Operations were curtailed in all but Louisiana Gulf and Rocky Mountain district plants.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Total Finished Motor Fuel*		Total Finished Gas & Fuel Oil	Gas & Fuel Oil	Cracked Gasoline Production % Total Capacity Reporting	Daily Av. Production (Barrels) Week Ended	
		May 4	Apr. 27	May 4	Apr. 27	May 4	Apr. 27	May 4	Apr. 27		May 4	Apr. 27
East Coast	100.0	414,000	465,000	67.6	79.9	16,265	**17,098	9,134	8,971	87.8	74,000	77,000
Appalachian	94.8	86,000	100,000	58.9	71.4	2,076	2,138	707	727	98.7	18,000	21,000
Ind., Ill., Ky.	95.9	320,000	357,000	75.5	84.6	9,379	9,546	4,186	4,162	96.8	110,000	107,000
Okla., Kans, Mo.	84.8	235,000	262,000	61.2	67.9	5,473	5,682	3,953	4,027	89.1	65,000	66,000
Inland Texas	48.5	83,000	87,000	51.9	52.1	1,398	1,376	1,760	1,736	70.9	23,000	20,000
Texas Gulf	96.4	494,000	511,000	83.0	87.1	6,104	6,543	8,955	8,939	98.5	101,000	103,000
La. Gulf	96.4	118,000	108,000	72.4	66.7	1,272	1,310	3,101	3,104	96.1	13,000	15,000
No. La., Ark.	90.0	41,000	45,000	56.9	58.4	274	273	313	313	95.7	6,000	8,000
Rocky Mt.	61.9	42,000	41,000	70.0	64.1	1,024	901	767	770	84.8	14,000	12,000
California	92.6	434,000	453,000	55.0	55.1	9,757	10,075	63,802	64,038	100.0	53,000	47,000
TOTAL	89.5	2,267,000	2,429,000	66.0	71.3	53,022	**54,942	96,678	96,787	92.5	477,000	476,000

*Includes stocks at refineries, in bulk terminals, pipe lines and in transit. **Revised.

Heating Oil Prices Steady To Higher

THE heating oil season has been prolonged by continued cold weather, and some distributors have had to buy additional supplies in order to take care of their regular customers.

Many refiners had discontinued production of heating oils and were unable to meet the demand. This has tended to bolster prices. In some markets heating oils were sold at higher prices.

Western Pennsylvania refiners obtained higher prices for their fuel oil. Advances ranged from 0.125 to 0.25 cent. The steel mills and cracking plants were taking all fuel oil offered.

* * *

TULSA, May 6.—Persistently cold weather in the north has prolonged the heating oil season several weeks.

Distributors as well as Mid-Continent suppliers were not prepared for the additional business brought about by continued cold weather. Refiners in many districts have long since discontinued making heating oils. Others have curtailed production to a point where they have little to sell above contract commitments. East Texas no longer was a factor in the market.

As a result distributors have found it increasingly difficult to obtain immediate shipments. Quotations for No. 1 oil at the highs of price ranges were more numerous.

U. G. I. gas oil was being sought for cracking stock at prices firmly entrenched at unchanged levels. Zero gas oil was steady.

Heavy fuels were closely held by most distributors in spite of lack of interest in some grades. No price shading was reported. East refiners were obtaining 60 cents for both cracked and uncracked fuel.

* * *

NEW YORK, May 4.—Heating oil markets were rather dull in the week ended May 4, although with temperatures lower than in the preceding week some slight increase in domestic consumption was reported. Distributor buying, however, remained pretty much of a routine nature.

Prices continued quite steady at seaboard terminals, according to most reports. Purchases of gas oil, which was reported to meet No. 2 specifications, for cargo shipment from the Gulf to Europe has kept the market there in good shape and very little of this oil was now moving into the northern seaboard markets.

Fuel oil contract conditions for next winter have not yet been determined according to last reports.

* * *

CHICAGO, May 4.—Heating oil continued to be the surprise of the Mid-Western tank-car market the week ended May 4.

Many sellers had expected that, as the end of the season drew near, prices would be lower. However, advances were noted in the prime white grades of No. 1 oils.

The first change in the market for heavy fuels was noted during the week ended May 4. Some sellers were quoting lower prices for the No. 4, 5 and 6 oils.

Continues Tax Opposition

CHICAGO, May 4.—The Burning Oil Distributors Association, Chicago, is continuing its drive against the proposed 0.5 cent federal tax on fuel and diesel oils in House Bill 5268.

Maps showing the congressional districts for metropolitan Chicago, and names of congressmen, were mailed to association members late this week by F. B. Caldwell, association secretary.

The maps can be used by members in writing their customers about notifying congressmen of opposition to the proposed fuel oil tax.

The letter also notifies members of recent developments in opposition to the bill.

Heating Oil

Following are tank wagon prices of various grades of heating oil at the points shown in various territories. Prices are in cents per gallon.

Prices in Effect May 6, 1935

	No. 1	No. 2	No. 3	No. 4
S. O. New Jersey				
Newark, N. J.	8	6.5	....	6.5
Atlantic City, N. J.	8	6.5	....	6.5
Baltimore, Md.	8.5	7	....	7
Washington, D. C.	8.75	7.25	....	7.25
S. O. New York				
New York City	8	7	7	6.5
Albany, N. Y.	8.5	6.75	6.75	6.50
Rochester, N. Y.	8.5	7	7	7
Boston, Mass.	8.50	6.50	6.50	6.50
Augusta, Me.	9.25	7.75	7.75	7.75
Manchester, N. H.	8.50	6.75	6.75	6.75
Burlington, Vt.	9	7.75	7.75	7.75
New Haven, Conn.	8.50	6.50	6.50	6.00
Providence, R. I.	8.50	6.50	6.50	6.50
	No. 1	**No. 2**	**No. 3**	**No. 4**
Atlantic Refining				
Philadelphia, Pa.	6.50	5.50	....	5.5
Allentown, Pa.	9	7.5	7.5	7.5
Wilmington, Del.	8.5	7	....	6.5
Springfield, Mass.	8.75	7.25	....	7.25
Worcester, Mass.	8.75	7.25	....	7.25
Hartford, Conn.	8.5	7	....	7
S. O. Ohio				
Ohio Statewide	8	7.75	7.50	7.25

Note: S. O. Ohio prices are for hose dumps; bucket dumps are 0.5c per gallon higher.

S. O. Indiana

Stanolex Fuel Oil No. 1

Chicago	7
Indianapolis, Ind.	*13.1
Detroit, Mich.	9.8
Minneapolis, Minn.	8.8
Sioux City, Ia.	8.4
St. Louis, Mo.	8.2
Kansas City, Mo.	7.9

*Includes state tax of 4c.

Discounts: at Chicago above price applies on 150 gals. or more; 100 to 149 gals., 0.5c higher, under 100 gals., 1.5c higher. Indianapolis and Detroit 1c off t.w. price for deliveries of 100 gals. and over; at St. Louis, 1c off for 50 gal. dumps and over; at other above points, 1c off t.w. price for deliveries 150 gals. and over.

Tells Cleaning Method For Dust Storm

CLEVELAND, May 4. — Proper cleaning of exterior and interior surfaces subjected to dust storms can be accomplished by using a pure, soft, linseed oil or flax soap, according to Dr. C. D. Holley, chief chemist of The Sherwin-Williams Co., after making a series of tests.

He adds, "Make a good suds in lukewarm water, use a brush or sponge or cloth for washing the dirt off the surface, then rinse thoroughly with plain water."

Excellent results can be had where a good quality paint has been used, preferably a good prepared paint of multi-pigment base, it is said, or where a good grade of paint or lacquer, or synthetic varnish or enamel has been used. Cheap paints and single pigment house paints or hand mixtures are not so easily cleaned because their film has not the gloss and is too chalky.

The dust deposited by these storms is not ordinary dust, it is pointed out, but contains alkali and has greasy characteristics which are bad for the paint film and make it desirable to wash the surfaces as soon as possible. Neither plain water nor harsh soaps are satisfactory, it has been determined.

City Sues Oil Companies

TULSA, May 4.—Six oil companies have been sued for $200,00 by the City of Pawhuska, Okla., for alleged pollution of its water supply. Demandants are: W. C. Norris, I. Nadel, Simon Lebow, Sinclair-Prairie Oil Co., Peters Petroleum Co., Helena Oil Co., James Brann, Arthur Brann and the Shell Petroleum Corp.

The suit alleges the defendants, operating leases on the watersheds of Bird and Clear creeks, have permitted those streams to become polluted, and that the city will have to spend $200,000 to obtain a new water supply and plant.

Anti-Premium Bill Defeated

MADISON, May 4.—The Wisconsin senate defeated a bill May 2 to eliminate all trading stamp and premium merchandise. The vote was 22 to 5.

CRUDE OIL MARKETS

Prices in $ per bbl. of 42 U. S. gals. at the well, A. P. I. gravity. Prices are effective as of 7 a.m. of dates as given.

Eastern Fields

Posted by Joseph Seep Purchasing Agency

(Effective Feb. 4, 1935, except Corning effective Oct. 2, 1933)

Bradford District oil in National Transit Lines $2.20
Penna Grade Oil in Southwest Penna. Pipe Lines....$2.02
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)....$1.97
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.)....$1.87
Corning Oil in Buckeye Pipe Lines (Ohio)..$1.32

Posted by Other Companies

Tide Water Pipe Co., Ltd.:
Bradford-Allegheny district (Penna. and N. Y.) (Effective Feb. 4, 1935)....$2.35
*The Pennzoil Co.: (Effective Feb. 4, 1935)
Penna. Grade Oil in National Transit Lines*$2.27
Ashland Oil & Transportation Co.: (Effective Sept. 10, 1933):
Somerset Oil in Ashland Lines (Ky.)....$1.23

*The Pennzoil Co. posts $2.27 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in other districts range down to $2.22 per bbl. at well.

Michigan

(Posted by Pure Oil Co.)

Midland, Midland County (Sept. 30, 1933)..$1.02

(Posted by Simrall Pipe Line Corp.)

West Branch (Apr. 1, 1934)....$0.86

Central States Fields

Posted by Ohio Oil Co.

(Effective Feb. 1, 1935)		(Effective May 26, 1934)	
Lima	$1.15	West. Kentucky	$1.08
	(Effective Jan. 5, 1934)		
Princeton	$1.13	Illinois	$1.13

Canadian Fields

Posted by Imperial Oil Refineries, Ltd.

Western Ontario

(Effective Sept. 9, 1933)

Petrolia....$2.10
Oil Springs....$2.17

Alberta—Turner Valley

(Prices f.o.b. field tankage)

Crude: (Effective Dec. 9, 1933)		Naphtha: (Effective May 21, 1934)	
40-44.9	$1.50	†Clear	$2.31
45-49.9	2.07	†Discolored	$2.55
(Effective May 21, 1934)			
50 and above	$2.19		

†Clear naphtha: 22 color; 10 lbs. vapor pressure, Reid method; 90% recovery; end point, 410°. Discolored naphtha: same specifications as for clear naphtha except color.

Mid-Continent

Posted by Stanolind Crude Oil Purchasing Co

(Effective Sept. 29, 1933)

(In Oklahoma-Kansas)		(In North-North Central Texas)
Below 29	$0.84	$0.79
29-29.9	0.86	0.81
30-30.9	0.88	0.83
31-31.9	0.90	0.85
32-32.9	0.92	0.87
33-33.9	0.94	0.89
34-34.9	0.96	0.91
35-35.9	0.98	0.93
36-36.9	1.00	0.95
37-37.9	1.02	0.97
38-38.9	1.04	0.99
39-39.9	1.06	1.01
40 and above	1.08	1.03

Above Stanolind prices met as follows:

Sept. 29, by The Texas Co. in Oklahoma, and in North and North Central Texas; Continental Oil in all three states; by Empire, White Eagle and Gypsy (Gulf).

See also Carter Oil, Magnolia, Humble schedules below and footnotes under Carter table.

Posted by Carter Oil Co.

(In Oklahoma and Kansas)

(Effective Sept. 29, 1933)

Below 25	$0.76	33-33.9	$0.94
25-25.9	0.78	34-34.9	0.96
26-26.9	0.80	35-35.9	0.98
27-27.9	0.82	36-36.9	1.00
28-28.9	0.84	37-37.9	1.02
29-29.9	0.86	38-38.9	1.04
30-30.9	0.88	39-39.9	1.06
31-31.9	0.90	40 and above	1.08
32-32.9	0.92		

Sept. 29, Carter gravity and price schedule met in Oklahoma-Kansas by Sinclair-Prairie, and Humble price schedule met in North-North Central Texas except that Sinclair-Prairie posts five lower grades down to below 25, with 2c differential for each. Same day, Shell Petroleum met Carter in full in Oklahoma-Kansas.

Posted by Magnolia Petroleum Co.

(Effective Sept. 29, 1933)

In Oklahoma, same schedule as Carter Oil, which see above, beginning with below 25, at $0.76 and ending with 40 & above, at $1.08.

In Texas: North and North Central, including Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden; and in Central Texas, including Mexia, Wortham, and Panola county, same gravity and price schedule as Stanolind in Texas, which see above, beginning with below 29 at $0.79, and ending with 40 and above, at $1.03.

†Posted by Humble Oil & Refining Co.

*(*In North, North Central and Central Texas)*

(Effective Sept. 29, 1933)

Below 29	$0.79	35-35.9	$0.93
29-29.9	0.81	36-36.9	0.95
30-30.9	0.83	37-37.9	0.97
31-31.9	0.85	38-38.9	0.99
32-32.9	0.87	39-39.9	1.01
33-33.9	0.89	40 and above	1.03
34-34.9	0.91		

*Including North Texas, Ranger, Mexia, Powell, Boggy Creek, Richland, Wortham, Currie and Moran fields.

†Effective Dec. 1, 1934, Humble prices are based on 99% tank tables at 60F. Allowance or deduction of 1% is made for each 25° change in temperature above or below 60F.

Panhandle Texas

Posted by Humble Oil & Refining Co.

(Effective Sept. 29, 1933)

	Gray County	Carson-Hutchinson
Below 35	$0.79	$0.69
35-35.9	0.81	0.71
36-36.9	0.83	0.73
37-37.9	0.85	0.75
38-38.9	0.87	0.77
39-39.9	0.89	0.79
40 & above	0.91	0.81

Sept. 29, above prices met by Sinclair-Prairie, Magnolia and The Texas Co. in the entire area, also by Continental Oil in Carson-Hutchinson.

East Texas

(Effective Sept. 29, 1933)

Stanolind, Humble, Sinclair-Prairie, Texas and Magnolia....$1.00

West Texas and New Mexico

Posted by Humble Oil & Refining Co.

(Effective Sept. 29, 1933)

Ector, Pecos and Winkler Counties, W. Texas and Lea Co., N. M....$0.75
Crane, Upton, Crockett, Howard and Glasscock county, W. Tex....$0.70

Sept. 29, Magnolia met in Crane, Upton, Howard, Glasscock, Mitchell and Winkler. Sept. 29, Texas Co. met Humble in Winkler, Crane, Upton and Lea counties; Stanolind Oil & Gas met in Hendrich field, Winkler county and posted in Marion county, Tex. below 25 at $0.63, plus 2c differential to 40 & above at $0.95.

South and Southwest Texas

Posted by Humble Oil & Refining Co.

(Effective Sept. 29, 1933)

Darst Creek	$0.87	Mirando	$0.80
Salt Flat	0.87	Pettus	1.05
Saxet	0.85	Tomball	1.15

Sept. 30, The Texas Co. met Humble in Darst Creek. On Sept. 29 it posted $0.80 in Duval county and $0.85 in Saxet-Greta.

Oct. 2, Magnolia posted $0.87 in Darst Creek and $1.15 in Tomball; Sept. 29 it posted $0.80 in Mirando, $0.75 in Luling and $0.95 in Lytton Springs.

Jan. 11, 1934 Magnolia posted $1.00 for Cleveland-Liberty county, Tex.

Posted by Humble

Conroe *(Montgomery Co., Tex.)*

(Effective Sept. 29, 1933)

35-35.9	$1.09	38-38.9	$1.15
36-36.9	1.11	39-39.9	1.17
37-37.9	1.13	40 & above	1.19

Sept. 30 Texas Co. met above prices.

North Louisiana-Arkansas

Posted by Standard Oil Co. of Louisiana

(Effective March 17, 1934, except Homer, Smackover and Nevada county, Sept. 29, 1933).

(In Caddo, Homer, Haynesville, Sabine, De Soto, Sarepta, Carterville, El Dorado and Miller county).

Below 25	$0.71	33-33.9	$0.89
25-25.9	0.73	34-34.9	0.91
26-26.9	0.75	35-35.9	0.93
27-27.9	0.77	36-36.9	0.95
28-28.9	0.79	37-37.9	0.97
29-29.9	0.81	38-38.9	0.99
30-30.9	0.83	39-39.9	1.01
31-31.9	0.85	40 and above	1.03
32-32.9	0.87		

Smackover, Ark....$0.70
Nevada, Ark....0.60
Urania, La. (La. Oil Refg. Co., Jan. 1, '34)... 0.87

*Gulf Coastal Fields

Posted by Humble Oil & Refining Co.

(Effective Sept. 29, 1933)

Below 20	$0.82	27-27.9	$0.98
20-20.9	0.84	28-28.9	1.00
21-21.9	0.86	29-29.9	1.02
22-22.9	0.88	30-30.9	1.04
23-23.9	0.90	31-31.9	1.06
24-24.9	0.92	32-32.9	1.08
25-25.9	0.94	33-33.9	1.10
26-26.9	0.96	34 and above	1.12
Refugio heavy			$0.85

Effective Dec. 1, 1934 Humble prices are based on 99% tank tables at 60 F. Allowance or deduction of 1% is made for each 25° change in temperature above or below 60 F.

*Includes these fields: Barbers Hill, Goose Creek, Hull, Humble, Liberty, Moss Bluff, Orange, Pierce Junction, Rabbs Ridge, Raccoon Bend, Refugio light, Sour Lake, Spindletop, Sugarland, and West Columbia.

Above prices met Sept. 29 by Sinclair-Prairie and Sun Pipe Line Co.

Posted by The Texas Co.

(Effective Sept. 30, 1933)

Same gravity and price schedule as Humble up to 30-30.9 gravity, which see; plus these grades:

30-30.9	$1.04	36-36.9	$1.10
31-31.9	1.05	37-37.9	1.11
32-32.9	1.06	38-38.9	1.12
33-33.9	1.07	39-39.9	1.13
34-34.9	1.08	40 and above	1.14
35-35.9	1.09		

Rocky Mountain Fields

Posted by Stanolind Oil & Gas Co.

(Effective Sept. 29, 1933)

Salt Creek and Dutton Creek, Wyo. Same schedule as Stanolind posts in Oklahoma-Kansas which see on first crude price page.

Elk Basin, light....$1.18
Grass Creek, light....1.18
Grass Creek, heavy....0.62
Greybull-Torchlight....1.18
Iles, light, Col....0.96
Iles, heavy....0.90
Hogback, N. M....1.11
Frannie light (Effective May 1, 1934)....0.70
Frannie heavy....0.62

Posted by Ohio Oil Co.

(Effective Sept. 29, 1933)

Elk Basin, Wyo....$1.18
Grass Creek, light....1.18
Rock Creek....1.02
Big Muddy....1.01
Sunburst, Mont....1.35

Posted by *International Refining Co.

(Effective May 23, 1934)

Cutbank, Mont....$1.45

*Texas Co. subsidiary.

Crude Oil Markets, continued from preceding page

CALIFORNIA, Posted by Standard Oil of California

All gravities above those quoted take highest price offered in the field. Effective Sept. 6, 1933

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa De Rey	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier-La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Paula (Union Oil Co.)	Orcutt (Union Oil Co.)
14-14.9	$0.65	$0.65	$0.65	$0.65	$0.65	$0.65	....	....	$0.65	$0.65	$0.65	$0.65	$0.65	....	$0.57	$0.57	$0.57	$0.57	$0.57	$0.57	....
15-15.9	.65	.65	.69	.69	.66	.69	....	....	.66	.65	.65	.65	.65	....	.57	.57	.57	.57	.57	.57	....
16-16.9	.66	.65	.72	.73	.69	.73	....	....	.69	.67	.68	.65	.65	....	.57	.57	.57	.57	.57	.57	$0.57
17-17.9	.69	.65	.75	.76	.73	.76	....	....	.72	.70	.71	.65	.68	....	.57	.57	.57	.57	.57	.57	.57
18-18.9	.72	.65	.78	.80	.76	.79	....	....	.75	.74	.74	.65	.71	....	.57	.61	.61	.59	.58	.60	.61
19-19.9	.75	.65	.81	.83	.80	.82	....	....	.78	.78	.78	.65	.74	....	.57	.64	.65	.62	.61	.63	.64
20-20.9	.78	.68	.83	.87	.83	.85	....	....	.81	.82	.81	.66	.78	....	....	.67	.69	.65	.64	.66	.67
21-21.9	.81	.72	.86	.90	.87	.88	....	....	.83	.85	.85	.69	.81	$0.72	....	.70	.73	.68	.67	.69	.70
22-22.9	.84	.76	.89	.94	.90	.92	....	....	.86	.89	.87	.72	.84	.76	....	.73	.76	.72	.70	.72	.73
23-23.9	.88	.81	.92	.97	.94	.95	$0.83	F.O.B. Ship	.89	.93	.90	.76	.87	.79	....	.77	.79	.75	.73	.75	.77
24-24.9	.91	.85	.95	1.01	.97	.98	.86		.92	.97	.93	.80	.90	.83	....	.81	.82	.78	.76	.78	.81
25-25.9	.94	.89	.98	....	1.00	1.01	.90	....	.95	1.00	....	.85	.93	.87	....	.85	.85	.81	.79	.81	.85
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	....	.98	1.04	....	.89	.96	.90	....	.89	.88	....	....	.84	.89
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	....	1.08	....	....	.99	.94	....	.93	.91	....	....	.88	....
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	....	1.11	....	....	1.02	.98	....	.97	.94	....	....	.92	....
29-29.9	1.06	1.06	1.09	....	....	....	1.04	....	....	1.15	....	....	1.05	1.01	....	1.01	.97	....	....	.96	....
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....				1.09	1.05	....	1.05	1.00	....	....	1.00	....
31-31.9	....	....	....	....	....	....	1.12	....	....				1.12	1.08	....	1.09	....	....	....	....	....
32-32.9	....	....	....	....	....	....	1.15	....	....	Kettleman Hills			1.15	1.12	....	1.13	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	$1.03	....	$0.93			1.18	1.16	....	1.17	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	1.06	....	.96			1.21	1.19	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	1.09	....	.99			....	1.23	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	1.12	....	1.02			....	1.26	....	....	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	1.15	....	1.05			....	1.30	....	....	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	1.08			....	1.34	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	1.11			....	....	....	....	....	....	....	....	....

Subject to Field Gathering Charge of 5c per Bbl.

NEW REFINING PATENTS

Dewaxing. No. 1 995 744, issued March 26, 1935; filed Aug. 8, 1931; E. J. Martin, assignor to Sinclair Refining Co.

PETROLEUM wax containing crystalline wax and a diluent stock are chilled to the pressing temperature separately, mixed together, and the resulting more mobile mass is subjected to pressure.

Claims (2)

Chilling the paraffin distillate and separately chilling a diluent stock to the pressing temperature, mixing the two and pressing the mixture.

* * *

De-emulsification. No. 1 993 646, issued March 5, 1935; filed Jan. 16, 1931; A. W. Burwell, assignor to Alox Chemical Corp.

PREPARATION and use of de-emulsifying agents consisting of organic products derived from intermediate products produced during the controlled liquid-phase oxidation of hydrocarbons. The agents are used in breaking water-in-oil emulsions.

Claims (8)

De-emulsifying water-in-oil emulsions by treating with constituents of a mixture obtained by contacting an oxidizing gas with a mixture of liquid hydrocarbons at around 155° C. and 350 pounds per square inch pressure, in the presence of a promoter of oxidation, until acidic compounds soluble in the reaction mixture are formed, thereby producing a reaction mixture containing unoxidized oil and both saponifiable and unsaponifiable oxidation products, and separating out at least the major proportion of the unsaponifiable oxidation reaction mixture whereby to obtain a mixture consisting largely of saponifiable acidic oxidation products of hydrocarbons.

* * *

Separating Diolefines. No. 1 993 681, issued March 5, 1935; filed April 24, 1931; G. A. Perkins, assignor to Carbide and Carbon Chemicals Corp.

SEPARATION of diolefines having conjugated double bonds from mixtures rich in olefines by forming monomeric addition products which are crystalline and soluble, without a catalyst or restrainer, minimizing the formation of insoluble amorphous addition products by avoiding a large excess of sulfur dioxide or by causing the mixture to be contacted with small amounts of sulfur dioxide in step-wise fashion. Another object is the sulfating of olefines and preparing alcohols therefrom, and providing means for purifying the diolefines.

Claims (15)

Separating diolefines by heating a hydrocarbon mixture with less than one-half its weight of sulfur dioxide at around 100° C. and under superatmospheric pressure, and removing the diolefine-sulfur dioxide addition product.

Stabilization. No. 1 995 615, issued March 26, 1935; filed Sept. 1, 1931; A. O. Jaeger, assignor to American Cyanamid & Chemical Corp.

PREVENTION of formation of colored gums by the use of the esters of carboxylic acids. Esters of higher molecular acids and particularly polybasic acids and keto aromatic acids are preferable in quantities ranging from 0.01 to 1.0 per cent.

Claims (3)

A cracked motor fuel normally tending to deteriorate on storage to which has been added an ester of an unsaturated di-carboxylic acid in quantities sufficient to retard such deterioration.

* * *

Organic Products. No. 1 995 752 and 1 995 753, issued March 26, 1935; filed Aug. 5, 1933; A. Schaarschmidt, assignor to Antares Trust Registered (Germany).

PRODUCTION of organic products containing oxygen from hydrocarbons, particularly, keytone-like products from saturated aliphatic or alicyclic hydrocarbons by reacting them with carbonyl halide, such as phosgene, in the presence of an aluminum halide and by maintaining the temperature below normal room temperature.

1 995 752 Claims (13)

Production of organic products containing oxygen by treating saturated non-aromatic hydrocarbons containing at least one tertiary carbon atom and non-aromatic hydrocarbons containing no tertiary carbon atoms, with phosgene in the presence of aluminum chloride at below room temperature,

(*Continued on page 70*)

SEABOARD MARKETS, Export *and* Coastwise

PRICES *DO NOT* INCLUDE FEDERAL TAX

Eastern Domestic

(Prices in cents per gallon tank car lots, unless otherwise noted, f.o.b. refinery or seaboard terminal, representing majority of sales and quotations to jobbers and/or consumers. Florida and S. Carolina inspection tax not included.)

Motor Gasoline

Prices May 6	U. S. Motor *59 Octane and Below	60-64 Octane	65 Octane and Above
New York harbor	.....	6.00	6.25
New York harbor, barges	.....	5.75	6.00
Philadelphia district	.....	5.75 – 6.25	6.00 – 6.25
Baltimore district	.....	5.75 – 6.00	6.00 – 6.25
Norfolk district	.....	5.75 – 6.00	6.00 – 6.25
Wilmington, N. C., district	.....	5.75 – 6.00	6.00 – 6.25
Charleston, S. C., district	.....	5.75 – 6.00	6.00 – 6.25
Savannah district	.....	6.25 – 6.50	6.50 – 6.75
Jacksonville district	.....	6.25 – 6.50	6.50 – 6.75
Portland district	.....	6.25	6.50
Boston district	.....	6.00	6.25
Boston district, barges	.....	5.75	6.00
Providence district	.....	6.00	6.25
Providence district, barges	.....	5.75	6.00

*Due to lack of companies offering U. S. Motor gasoline, 59 octane and below in the open market, prices for this grade are being discontinued. Quotations nominally are 0.25c below those for 60-64 octane grade.

Water White Kerosine

Prices May 6			
New York harbor	5.25	Savannah district	5.50
N. Y. harbor, barges	5.00	Jacksonville district	5.50
Philadelphia district	5.50	Portland district	5.50
Baltimore district	5.50	Boston district	5.25
Norfolk district	5.50	Boston dist., barges	4.75 – 5.00
Wilmington, N. C.	5.50	Providence district	5.25
Charleston district	5.50	Prov. dist., barges	5.00

Heating Oil

Prices May 6	New York harbor	New York harbor, barges	Philadelphia district
No. 1	5.00 – 5.25	4.75 – 5.00	5.25 – 5.50
No. 2	4.00 – 4.25	3.75 – 4.00	4.25
No. 3	4.00 – 4.25	3.75 – 4.00	4.25
No. 4	4.00 – 4.25	3.75 – 4.00	4.25
No. 5 (per barrel)	$1.35	.....	$1.35
No. 6 (per barrel)	$1.15	.....	$1.15

	Baltimore district	Boston district
No. 1	5.50	5.00 – 5.25
No. 2	4.25	4.25
No. 3	4.25	4.25
No. 4	4.25	4.25
No. 5 (per barrel)	$1.35	$1.45
No. 6 (per barrel)	$1.15	$1.15

	Boston dist., barges	Providence district	Providence dist., barges
No. 1	4.75 – 5.00	5.00 – 5.25	5.00
No. 2	4.00 – 4.25	4.25	4.00 – 4.25
No. 3	4.00 – 4.25	4.25	4.00 – 4.25
No. 4	4.00 – 4.25	4.25	4.00 – 4.25

	Bunker Oil Grade C Per Barrel	Diesel Oil Ships' Bunker Per barrel	Gas Oil 28-34 Gravity Per gallon	Diesel Oil Shore Plants Per gallon
New York harbor	*$1.15	*$1.89	4.25	4.25
Philadelphia dist.	*$1.15	*$1.89	4.25	.....
Baltimore district	*$1.15	*$1.89	4.25	.....
Norfolk district	*$1.15	*$1.89	4.25	.....
Charleston district	$1.10	$1.89	.....	.....
Savannah district	$1.10	$1.89	.....	4.75
Jacksonville dist.	$1.10	$1.89	.....	4.75
Tampa district	$1.10	$1.89	.....	.....
Portland district	$1.25	$1.99	.....	.....
Boston district	$1.15	*$1.89	.....	.....
Providence district	$1.15	$1.89	.....	.....

*Lighterage for bunker oil, 5c per bbl. additional; for Diesel oil, 6.5c per bbl. additional.

Pacific Export

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

Prices—	May 6	April 29	April 22
53-55 U. S. Motor	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
400 e.p. blend 65 Octane and above	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
38-40 w.w. kerosine, 150 fire point	4.25 – 5.00	4.25 – 5.00	4.50 – 5.00
41-43 w.w. kerosine	4.50 – 5.00	4.50 – 5.00	4.75 – 5.00
41-43 p.w. kerosine	5.00	5.00	5.00
44 w.w. kerosine	4.00 – 4.50	4.00 – 4.50	4.00 – 4.50
In Cargo lots, per barrel:			
Diesel fuel oil, above 23.9 gravity	$1.10 –$1.25	$1.10 –$1.25	$1.10 –$1.25
Diesel fuel oil, under 23.9 gravity	$1.05 –$1.10	1.05 –$1.10	$1.05 –$1.10
Grade C fuel oil	$0.75 –$0.85	$0.75 –$0.85	$0.75 –$0.85
Pacific Export (cont'd)			
In Ships' Bunkers, or deep tank lots, per barrel:			
Diesel fuel oil, above 23.9 gravity	$1.275–$1.30	$1.275–$1.30	$1.275–$1.30
Diesel, under 23.9 gravity	$1.175–$1.20	$1.175–$1.20	$1.175–$1.20
Grade C fuel oil	$0.925–$0.95	$0.925–$0.95	$0.925–$0.95
Cased Goods:			
Gasoline, U.S. Motor	$1.40 –$1.50	$1.40 –$1.50	$1.40 –$1.50
Gasoline, 400 e.p. blend	$1.60 –$1.75	$1.60 –$1.75	$1.60 –$1.75
38-40 w.w. kerosine, 150 fire point	$1.20 –$1.30	$1.20 –$1.30	$1.20 –$1.30
Kerosine, prime white	$1.05 –$1.15	$1.05 –$1.15	$1.05 –$1.15

New York Export

(Prices in cents per gallon in barrels, F.a.s. New York)

Cylinder Oils (Pennsylvania Products)

	May 6	April 29	April 22
Bright stock, Light	21.00 –21.50	21.00 –21.50	21.00 –21.50
Bright stock, Dark	21.50 –22.00	21.50 –22.00	21.50 –22.00
10-15 pour test	24.00 –25.00	24.00 –25.00	24.00 –25.00
Neutral 200 No. 3 color	28.50 –29.00	28.50 –29.00	28.50 –29.00
Neutral 150 No. 3 color	23.50 –24.00	23.50 –24.00	23.50 –24.00
600 Warren E filtered	18.50 –19.00	18.50 –19.00	18.50 –19.00
600 stm. refd. unfiltered	14.50 –15.00	14.50 –15.00	14.50 –15.00
650 stm. rfd. unfiltered	16.00 –17.00	16.00 –17.00	16.00 –17.00
600 flash, steam refined	16.50 –17.50	16.50 –17.50	16.50 –17.50
630 flash, steam refined	21.00 –21.50	21.00 –21.50	21.00 –21.50

Wax Domestic *and* Export

(Prices in cents per pound. Tests made by A. S. T. M. methods. Melting points shown below, however, are A. M. P., 3° higher than A. S. T. M. (E. M. P.) melting points. Export prices are f.a.s. carload lots. Domestic prices are f.o.b. refineries in New York and New Orleans districts, in bags, carload lots, with 0.2c discount allowed for shipment in bulk).

	New York		New Orleans	
Prices—May 6	*Domestic*	*Export*	*Domestic*	*Export*
124-6 Y.C. scale	2.05 – 2.10	2.05 – 2.10	2.05 – 2.10	2.05 – 2.10
122-4 W.C. scale	2.05 – 2.125	2.05 – 2.125	2.05 – 2.125	2.05 – 2.125
124-6 W.C. scale	2.05 – 2.15	2.05 – 2.15	2.05 – 2.15	2.05 – 2.15
123-5 Fully refined	4.20	3.625– 3.75	4.20	3.625– 3.75
125-7 Fully refined	4.30	3.75 – 4.00	4.30	3.75 – 4.00
128-30 Fully refined	4.55	4.00 – 4.25	4.55	4.00 – 4.25
130-2 Fully refined	4.80	4.25 – 4.50	4.80	4.25 – 4.50
133-5 Fully refined	5.30	4.75 – 5.00	5.30	4.75 – 5.00
135-7 Fully refined	5.55	5.00 – 5.25	....	....

Gulf Coast

(Prices are f.o.b. Gulf oil terminals representing sellers' opinions except prices specified to the contrary. Prices cover bulk shipments of 20,000 barrels or more, unless otherwise noted.)

Motor Gasoline

For Domestic Shipment

Prices—	May 6	April 29	April 22
59 octane and below	5.00 – 5.125	5.00 – 5.125	5.00 – 5.125
60-64 octane number	5.125– 5.25	5.125– 5.25	5.125– 5.25
65 octane and above	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50

Heating Oils

No. 1 Heating oil	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
No. 2 Heating oil	3.125– 3.25	3.125– 3.25	3.125– 3.25
No. 4 Heating oil	2.875– 3.00	2.875– 3.00	2.875– 3.00

Kerosine

41-43 w.w.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25

Gasoline

For Export Shipment

U. S. Motor gasoline	4.625– 4.75	4.625– 4.75	4.625– 4.75
60-62, 400 e.p. gasoline	4.75 – 4.875	4.75 – 4.875	4.75 – 4.875
61-63, 390 e.p. gasoline	4.875– 5.00	4.875– 5.00	4.875– 5.00
64-66, 375 e.p. gasoline	5.00 – 5.125	*5.00	5.00 – 5.125
U. S. Motor, cases (cargoes)	$1.20 –$1.25	$1.20 –$1.25	$1.20 –$1.25
64-66, 375 e.p. cases (cargoes)	$1.25 –$1.30	$1.25 –$1.30	$1.25 –$1.30

Kerosine

44 water white	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
41-43 water white	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
41-43 prime white	3.875– 4.125	3.875– 4.125	3.875– 4.125
W.W., cases (cargoes)	$1.15 –$1.20	$1.15 –$1.20	$1.15 –$1.20
P.W., cases (cargoes)	$1.10 –$1.15	$1.10 –$1.15	$1.10 –$1.15

Gas and Bunker Oils

For Domestic and/or Export Shipment

*26-30 translucent gas oil	2.875– 3.00	2.875– 3.00	2.875– 3.00
*30 plus translucent gas oil	3.125	3.125	3.125
30 plus transp. gas oil	3.125– 3.25	3.125– 3.25	3.125– 3.25
Diesel Oil Ships' bunkers	†$1.70	†$1.70	†$1.70
Grade C bunker oil, for ships' bunkers, per bbl.	†$1.00	†$1.00	†$1.00
Grade C bunker oil, per bbl. in cargoes	$0.80 –$0.85	$0.815–$0.85	$0.85

*Less than ½ of 1% sulphur. †Lighterage 5c per bbl. additional.

(*Continued on next page*)

Seaboard Markets, Exports *and* Coastwise, Continued from Preceding Page

PRICES DO NOT INCLUDE FEDERAL TAX

Mexican Crude and Bunker Oils

(F.o.b. Steamer, Tampico)

Heavy Panuco crude taxes to be paid, per bbl.....	$1.00 –$1.03	$1.00 –$1.03	$1.00 –$1.03
Grade C bunker oil, ships' bunkers, taxes paid, per bbl.....	$1.00	$1.00	$1.00

Mid-Continent Lubricating Oils

(Prices in cents per gallon in bbls. f.a.s. Gulf terminals. In drums and new barrels, 0.5c to 1c higher per gal. in some instances.)

190-200 vis. D 210 brt. stk.	22.50 –23.50	22.50 –23.50	22.50 –23.50
150-160 vis. D 210 brt. stk.	.....	.....	.....
0-10 pour point.....	19.50 –20.50	19.50 –20.50	19.50 –20.50
10-25 pour point.....	20.00 –20.50	20.00 –20.50	20.00 –20.50
25-40 pour point.....	19.00 –19.50	19.00 –19.50	19.00 –19.50
150-160 vis. E 210 brt. stk.	19.00 –19.50	19.00 –19.50	19.00 –19.50
120 vis. D 210 bright stock	19.25 –19.75	19.25 –19.75	19.25 –19.75
180 vis. No. 3 color neutral oil:			
0-10 pour point.....	17.25 –17.50	17.25 –17.50	17.25 –17.50
15-30 pour point.....	16.25 –16.75	16.25 –16.75	16.25 –16.75
200 vis. No. 3 color neutral oil:			
0-10 pour point.....	17.75 –18.25	17.75 –18.25	17.75 –18.25
15-30 pour point.....	16.75 –17.25	16.75 –17.25	16.75 –17.25
600 s.r. olive green.....	12.00 –12.50	12.00 –12.50	12.00 –12.50
600 s.r. dark green.....	9.50 –10.50	9.50 –10.50	9.50 –10.50
631 s.r.....	14.00 –14.50	14.00 –14.50	14.00 –14.50

South Texas Lubricating Oils

(Viscosity at 100° F. cold test 0. Tanker, f.o.b. Gulf oil terminals, for export shipment)

Prices—	May 6	April 29	April 22
100 vis. No. 3 unfilt. pale..	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
200 vis. No. 3 unfilt. pale..	6.375– 7.00	6.375– 7.00	6.375– 7.00

South Texas Lubricating Oils (cont'd)

Prices—	May 6	April 29	April 22
300 vis. No. 3 unfilt. pale..	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
500 vis. No. 3½ unfilt. pale	7.875– 8.50	7.875– 8.50	7.875– 8.50
750 vis. No. 4 unfilt. pale..	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
1200 vis. No. 4 unfilt. pale	9.50 –10.00	9.50 –10.00	9.50 –10.00
2000 vis. No. 4 unfilt. pale	9.75 –10.25	9.75 –10.25	9.75 –10.25
100 vis. No. 5-6 red oil....	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
200 vis. No. 5-6 red oil....	6.125– 6.75	6.125– 6.75	6.125– 6.75
300 vis. No. 5-6 red oil....	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
500 vis. No. 5-6 red oil....	7.875– 8.50	7.875– 8.50	7.875– 8.50
750 vis. No. 5-6 red oil....	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
1200 vis. No. 5-6 red oil...	9.50 –10.00	9.50 –10.00	9.50 –10.00
2000 vis. No. 5-6 red oil...	9.75 –10.25	9.75 –10.25	9.75 –10.25

Note: Red oil prices shown above cover oils with green cast; prices for blue cast red oils are slightly lower in some cases.

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shipments per ton of 2240 pounds, British sterling: to U. S. ports, cents per barrel)

Rates—May 6	Crude &/or Fuel Oil Last Paid	Crude &/or Fuel Oil Owners Ask	Refined Oil &/or Spirits Last Paid	Refined Oil &/or Spirits Owners Ask
Calif.-U.K./Continent*...	17/9	16/-18/	16/	16/6-17/
Gulf-U.K./Continent*...	10/6	10/6-11/	12/	12/-12/9
Calif.-N. Atlantic..... (not E. of N. Y.)	59c	55-60c	59c	50-52c
Gulf-N. Atlantic**..... (not E. of N. Y.)	†16c	†16-17c	16c	16-17c

Note: Dirty boat quotations are enlarged to cover, "Fuel and Light Crude" quotations.

*Continental ports in range between Bordeaux and Hamburg, both inclusive.

**Venezuela loading same rate: Tampico 2c to 3c per bbl. additional.

†Rates for heavy crude or fuel 1c to 2c higher than for light crude.

Adams Elected Treasurer Of Phillips Pet. Co.

BARTLESVILLE, Okla., April 30.—Kenneth F. Adams, assistant to the president of the Phillips Petroleum Co., here, has been elected treasurer of the company and a director. He succeeds the late O. K. Wing.

B. F. Stradley, who has been an assistant secretary, was named to succeed Mr. Adams.

Officers and directors were re-elected as follows:

Frank Phillips, president; John H. Kane, executive vice president; C. P. Dimit, W. N. Davis, H. E. Koopman, R. H. Lynn, G. G. Oberfell, J. M. Sands, F. E. Rice, H. A. Trower, C. R. Musgrave and M. P. Youker, vice presidents; R. M. Riggins, comptroller, and R. H. Hudson, general counsel.

Directors include H. M. Addinsell, Amos. L. Beaty, W. N. Davis, E. E. duPont, E. P. Earle, J. L. Johnston, J. H. Kane, H. E. Koopman, C. A. Lep, E. E. Loomis, G. G. Oberfell, Frank Phillips, W. C. Smoot, K. F. Adams and A. S. Woods.

Seek Change Welfare Plan

NEW YORK, May 3.—Preparing for social legislation expected during the present session of Congress, the stockholders of Standard Oil Co. (New Jersey) will be asked to vote to terminate the present stock purchasing plan of the company. The annual meeting is on June 4.

The company does not mean to dispense with this type of employe benefit plan, it was stated, but wishes to be free to make its position conform with proposed federal legislation. A combined annuity and stock purchase plan is understood to be under consideration, but probably no action will be taken until Congress passes on its social legislation bills.

The present stock purchase plan of the Jersey company was put into effect on January 1, 1935 to run for a three year period, as previous plans have done. Under this plan, the company contributed 50 cents to every $1.00 invested by the employe.

North Dakota Adopts A 2% Sales Tax

BISMARCK, May 4.—A 2 per cent sales tax became effective in North Dakota May 1. The tax applies to all petroleum products except gasoline.

Retailers are collecting the tax on the following schedule, approved by the retailers' association following conferences with the state tax commission: sales below 15 cents, no tax; sales 15 to 65 cents, 1 cent; 66 cents to $1.24, 2 cents; $1.25 to $1.74, 3 cents; $1.75 to $2.24, 4 cents; and on sales above $2.24 a 1 cent additional tax on each sale of 50 cents or fraction thereof.

Adoption of this schedule for service stations has been recommended by directors of the Northwest Petroleum Association.

Tide Water Directors, Officers Re-elected

NEW YORK, May 3.—Present officials of both the Tide Water Associated Oil Co. and the Tide Water Oil Co. were re-elected at board meetings here. William F. Humphrey is president of both companies.

Speaking at the annual meeting of stockholders, Mr. Humphrey stated it was the hope of the officials that preferred dividend arrearages amounting to $1.50 a share would be paid before the end of 1935. He announced negotiations of the Tide Water Oil Co. for the purchase of the Simms Oil Co., which has producing properties in Texas, New Mexico, Louisiana, Oklahoma and Kansas.

Mr. Humphrey also announced that Tide Water Oil Co. had purchased 101,959 shares of the common stock of the Mission Corp.

Interests headed by J. Paul Getty, a director of the company on the Pacific Coast, were voted down in an attempt to defeat an amendment to the certificate of incorporation and the by-laws to provide for reclassification of the directors. The amendment was sponsored by the management of the company. It provides that the board of directors shall be divided into three equal groups, to be elected for first terms of one, two and three years respectively, and thereafter to be elected for full terms of three years each. All directors were relected and placed in these new classifications.

New Refining Patents

(*Continued from page 67*)

separating the unreacted components and treating them with phosgene in the presence of an aluminum compound of a non-gaseous halogen while at the same temperature.

1 995 753 Claims (8)

The step of treating saturated aliphatic hydrocarbons containing no tertiary carbon atom with phosgene in the presence of an aluminum compound of a non-gaseous halogen, at below room temperature.

Polymerization. No. 1,991,354, issued Feb. 12, 1935; filed Nov. 25, 1931, W. B. Plummer and V. Voorhees, assignors to Standard Oil Co. (Ind.)

PROCESS of polymerizing gaseous olefines by conducting the operation in stages with partial cooling between each stage to avoid dangerously high temperatures and a fall-off in the rate of conversion.

Claims (5)

Process of polymerizing unsaturated gases comprising a plurality of successive steps wherein each series comprises passing the gases through a reaction zone maintained at 500 to 3000 pounds per square inch and between 700° to 1200° F., partially cooling gases and vapors leaving the reaction zone, separating condensed liquid products, and returning uncondensed gases and vapors to the next series of steps in indirect heat interchange relation with another reaction step, completely cooling gases and vapors following the last steps and recovering liquid products.

* * *

Solvent Recovery. No. 1,994,727, issued March 19, 1935; filed May 10, 1932; M. G. Paulus, assignor to Standard Oil Co.

REMOVAL of the last traces of solvent without decomposition or corrosion. Calcium oxide towers remove moisture and hydrochloric acid from the entering gas. The solvent is removed by stripping in a specially designed system with carbon dioxide, hydrogen, nitrogen or other non-oxidizing, inert gas.

Claims (4)

Recovery of small amounts of dichlorethyl ether or other solvent used in the extraction of mineral oils, which comprises stripping the oils with an inert medium whereby the solvent is removed and admixed with the stripping medium which is contacted with incoming oil to be extracted. The incoming oil absorbs the solvent from the tripping medium for reuse.

* * *

Desulfurizing. No. 1,996,008, issued March 26, 1935; filed June 23, 1931; H. Kaehler & H. Klein, assignors to Standard-I. G. Co.

DESULFURIZATION and hydrogenation of hydrocarbons with hydrogen or gases containing or supplying hydrogen in the presence of iron which has been activated with cobalt or nickel or both.

Claims (5)

Purifying sulfur-containing hydrocarbon mixtures which are solid or liquid at room temperatures by treating with hydrogen at between 200° and 475° C. under an elevated pressure (30 to 200 atmospheres) in the presence of metallic iron mixed with sufficient nickel or cobalt to activate the iron but not exceeding 10 per cent by weight of the iron while regulating the conditions so that no substantial cracking occurs.

* * *

Hydrogenation. No. 1,996,009, issued Mar. 26, 1935; filed July 29, 1932; C. Krauch and M. Pier, assignors to Standard-I. G. Co.

PROVISION for a catalyst immune to sulfur poisoning and efficient in the hydrogenation of carbonaceous materials of any kind including coal, lignite, peat, wood, mineral oils, shale oils, etc.

The oxides of the metals of the fourth group of the periodic system—titanium, germanium, zirconium, tin, cerium hafnium, lead, and thorium—were found to be suitable either singly

A gasoline
we guarantee!

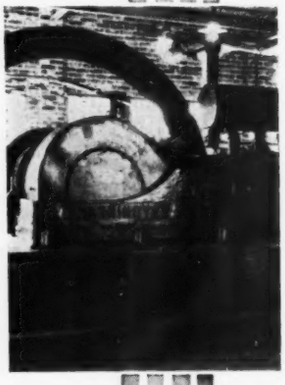
AND YOU CAN GUARANTEE!

Not another gasoline backed by claims—Cushing offers you a gasoline of high octane! — anti-knock, and we guarantee its performance. It's a new gasoline, the super motor fuel of 1935 because its performance comes out of the new modern plant that has cost Cushing thousands of dollars. But that's the only way we know how to give you a gasoline of real performance—not artificially doped-up—a gasoline you can endorse, and a product that will bring your customers back — a money maker!

Cannonball Service

WIRE, WRITE OR PHONE FOR QUOTATIONS

Anti-Knock 400 End Point
60-62 Better than U. S. Motor
60-62 Under 400 End Point
64-66 Under 375 End Point
68-70 Under 360 End Point
42-44 W. W. D. T. Kerosene
38-40 Light Straw Zero Distillate
32-36 Overhead uncracked Gas Oil
Straight Reduced also Cracked Fuel Oil



Interior Pump House, the new Cushing plant —partial view of hot oil pump.

Cushing

REFINING & GASOLINE COMPANY

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REFINERIES: CUSHING and BLACKWELL, OKLAHOMA

or in combination with each other or with other materials such as compounds of nitrogen, compounds containing combined sulfur, particularly sulfides of the heavy metals, or metals of the sixth group.

Claims (16)

Hydrogenation in the presence of an oxide of a metal of the fourth group of the periodic system at from 300° to 700° C. and a pressure of at least 20 atmospheres.

* * *

Coking. No. 1,995,005, issued March 19, 1935; filed Dec. 3, 1931; J. C. Morrell and C. H. Angell, assignors to Universal Oil Products Co.

REDUCTION of the non-vaporized products of cracking to coke in a reduced pressure zone outside of the main cracking zone and simultaneously reforming gasoline or pressure distillate. This produces a non-residuum operation outside of the main cracking zone and permits lengthening the operating cycle. The principles may be applied to practically any type of cracking system.

Claims (8)

Reducing unvaporized oil from a cracking process to coke at lower pressures, dephlegmating the vapors to condense fractions heavier than gasoline, separately condensing the gasoline vapors uncondensed by the dephlegmation and collecting the resultant distillate, passing a gasoline-containing portion of the distillate, without contact with vapors undergoing dephlegmation, through a second heating zone to increase its anti-knock value, introducing the heated distillate to the coking zone to assist the coking of the unvaporized oil, and removing the vapors from the coking zone and subjecting them to dephlegmation and condensation.

* * *

Cracking. No. 1,990,697, issued Feb. 12, 1935; filed June 7, 1929; W. O. Keeling.

APPARATUS for the formation and utilization of hot combustion gases in vapor phase cracking and for heating, distilling or cracking hydrocarbons. The fuel is completely oxidized into carbon dioxide and water vapor, and contains free nitrogen but practically no free oxygen and carbon monoxide. Combustion takes place outside the system so that no flame can contact the heated material and only the completely burned gases are passed through the system. A surface type burner makes available almost 100 per cent of the heat content of the fuel.

Claims (2)

Apparatus comprising a plurality of surface combustion burners of special design so that incandescent gases substantially devoid of free oxygen are passed directly from the burners through containers in which the processing of hydrocarbons is accomplished by the heat treatment of the gases.

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Gasoline Volatility Tests

(*Continued from page* 24-C)

parison of Fuels 1 and 3 on the standard car with factory adjustment at an atmospheric temperature of about 60F. indicates a gain in acceleration of about 45 per cent for Fuel 1 as compared with Fuel 3. When the carburetor is adjusted to give the best acceleration consistent with satisfactory driving conditions on each of these fuels, an improvement of about 30 per cent in acceleration is obtained when using Fuel 1 as compared with Fuel 3.

These results clearly indicate that the best performance can be obtained on the standard car with factory adjustment at an atmospheric temperatureof 60°F. only when the most volatile fuels are used, and that a further gain of from 15 to 20 per cent in top speed and acceleration can be obtained with the use of the more volatile fuels if the manifolding and cooling are modified so as to take full advantage of these high volatile fuels.

An interesting comparison between the gains in performance that may be obtained by the use of fuels of increased octane number when proper changes in the engine are made so as to take full advantage of the increased octane number, a series of accelerations were made with the same fuel but with the octane selector adjusted to correspond to the use of fuels of 43, 65 and 78 octane number. Using the operation corresponding to 43 octane number as a standard of comparison, the average acceleration was increased to 13.9 per cent with the adjustment corresponding to 65 octane and 16.2 with the adjustment corresponding to a 78 octane number fuel. In the paper given last year laboratory tests indicated corresponding gains of 13 and 20 per cent respectively by the use of fuels of 65 and 78 octane number as compared with a fuel of 43 octane number.

The improvement in performance obtained by increasing the octane number of the fuel from 43 to 78 is no more, if as much as, can be obtained by decreasing the temperature of the mixture as it enters the ports of the engine by 50F. and the use of a fuel of corresponding high volatility to insure satisfactory distribution in such a cold manifold.

Handling Customer Complaints

The question as to whether a complaining customer is an asset or a liability is answered in a report on Methods of Handling Customer Complaints by the Metropolitan Life Insurance Co., New York. According to the report there is a growing opinion that they offer opportunities for selling.

A discussion in some detail covers the methods used to assure satisfactory settlement. Case studies are presented and are illustrated with reproductions of the forms used in recording the receipt and handling of various complaints. The "silent complaint" is also an important consideration which is not overlooked in the report.

Copies of the report are available and may be had by addressing the company's Policyholders Service Bureau at New York.

Chicago Oil Man Dealt Perfect Bridge Hand

CHICAGO, May 3.—Nelson V. Joyce, vice-president of the Swan-Finch Oil Corp., was dealt a perfect hand of thirteen hearts in a contract bridge game at his home in Wilmette recently and made 3940 points.

His partner was C. L. Blanchard, a LaSalle street broker. They were opposed by Mrs. Joyce and Blanchard's brother, Knight.

C. L. Blanchard dealt and bid one club. Knight Blanchard passed, Joyce bid seven heart, which his wife doubled. He redoubled and laid down the hand.

Using old scoring rules he counted 2250 for a grand slam, being vulnerable, 840 for tricks, 150 for honors and 700 for a rubber.

The hand was dealt, said Joyce, after two hours of play.

Addresses Armour Institute

CHICAGO, May 6.—George B. Murphy, manager of the research and development laboratories of the Universal Oil Products Co., at Riverside, Ill., May 3 addressed the faculty and students of Armour Institute of Technology at the monthly meeting of the Armour section of the American Institute of Chemical Engineers. His subject was, "The Chemical Engineer in the Petroleum Industry."

New Naphtha Company

NEW YORK, May 6.—American Mineral Spirits Co. announces the formation of the Quaker Mineral Spirits Co., 1600 Arch St., Philadelphia.

E. M. Toby, Jr., is president of the new company and Lyman Quincy, formerly technical representative for the Sun Oil Co. at Philadelphia, is vice president.

Truck Association Elects

NEW YORK—John F. Winchester, supervisor of motor vehicle equipment for the Standard Oil Co. of New Jersey, was elected president of the New Jersey Motor Truck Association at a recent meeting of the directors.

Dr. Egloff Lectures on Oil Chemistry in Southwest

CHICAGO, May 6.—A series of lectures on refining and cracking of petroleum will be given by Dr. Gustav Egloff, Universal Oil Products Co. during May. Dr. Egloff wil make six lectures at points in Missouri, Kansas, and Oklahoma.

His itinerary is as follows: Missouri School of Mines and Metallurgy, Rolla, May 13, "Modern Refining of Petroleum"; American Petroleum Institute, Tulsa, May 15, "Polymer Gasoline from Cracked Gases"; Oklahoma Agricultural and Mechanical College, Stillwater, May 16, "Modern Products from Petroleum"; University of Oklahoma, Norman, May 16, "The Cracking Process—A Universal Source of Hydrocarbons"; American Chemical Society, Southeast Kansas Section, Pittsburgh, Kan. May 17, "Newer Products from the Cracking Process"; and American Chemical Society, Wichita, Kan., May 18, "Modern Products of the Refinery."

Declare 25c Dividend

SAN FRANCISCO, April 30.—Directors of Standard Oil Co. of California today declared a dividend of 25 cents a share on outstanding stock of record May 15, payable on June 15, 1935.

Coming Meetings

(*Continued from page 9*)

Pennsylvania Grade Crude Oil Assoc., annual meeting, State College, Pa., June 20, 21.

American Society for Testing Materials, annual meeting, Book-Cadillac Hotel, Detroit, June 24 to 28.

American Petroleum Equipment Suppliers' Assoc., place to be named later, some time in August.

American Chemical Society, San Francisco, Calif., Aug. 19 to 24.

Kentucky Petroleum Marketers Assn., Brown Hotel, Louisville, Ky., Sept. 4 and 5.

North American Gasoline Tax Conference, Arlington Hotel, Hot Springs, Ark., Sept. 18, 19, 20.

National Petroleum Association, annual meeting, Hotel Traymore, Atlantic City, N. J., Sept. 18, 19, 20.

Ohio Petroleum Marketers Assn., place to be named later, sometime in September.

National Safety Council, 24th Annual Safety Congress, Louisville, Ky., Oct. 14 to 18.

Independent Petroleum Assn. of America, Adolphus and Baker Hotels, Dallas, Tex., Nov. 4, 5.

American Petroleum Institute, 16th annual meeting, Biltmore Hotel, Los Angeles, Cal., Nov. 11 to 14.

California Natural Gasoline Assn., Los Angeles, Calif., some time in November.

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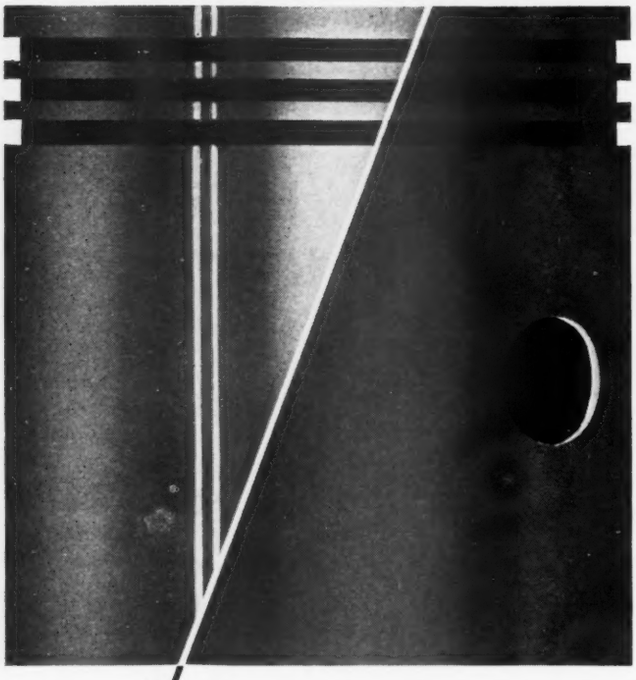

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Chicago Dealers Meet On June 11 and 12

CHICAGO, May 4.—The convention and supply exposition of the Chicago Service Station Operators Association will be held June 11 and 12 at the Medinah Club, Chicago.

Business meetings and speaking programs are being arranged for members and visitors during the day, and entertainments for both evenings. The exposition will be exhibits of service station equipment and petroleum supplies, and 92 booths are being sold.

The convention and exhibits are open to all retailers and jobbers. The National Association of Petroleum Retailers will be represented and plans to hold meetings for its members during the convention.

Entertainment is to consist of a dinner on the first evening, and a stag party on the second evening. Special features are being arranged, and association officials estimate that the value of the talent at the entertainments will exceed $5000.

The speaking program, and other convention details, will be announced later.

Minnesota Enacts Only One New Oil Law

MINNEAPOLIS, May 2.—The 1935 session of the Minnesota legislature has ended, and only one bill pertaining directly to the oil industry was passed.

This is house file 596, allowing the dealer a 1 per cent shrinkage allowance. Oil companies take the 3 per cent shrinkage allowance on inshipments of gasoline must provide the oil inspector with evidence that all sales made for resale included a 1 per cent allowance for shrinkage.

The Northwest Petroleum Association, in reporting legislative activities, announced that there is some talk of a special session as the regular session did not enact a general tax program.

Purchasing Agents to Meet

NEW YORK, May 4.—Annual convention of the National Association of Purchasing Agents will be held at the Waldorf-Astoria hotel, New York, May 20 to 23. Special theme of the meeting will be the effect of national and international governmental policies on commodity prices. V. A. Leslie of the American Petroleum Industries Committee, will speak on "Too Many Yodocks" at the May 22 session.

New Patents

Prepared by R. E. Burnham, patent and trade-mark attorney, 511 Eleventh street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 25c each. State number of patent and name of inventor when ordering.

April 23, 1935

REFINING

Separation of oil-wax mixtures—Ivan M. Perkins, Brookline, and Stewart S. Kurtz, Jr., Merion, Pa., assignors to Atlantic Refining Co. Filed July 3, 1931. No. 1,998,464.

Process for converting petroleum oils—Walter M. Cross, Kansas City, Mo., assignor to Gasoline Products Co. Filed July 24, 1930. No. 1,998,571.

Production of liquid hydrocarbons of the benzene series—Walter Speer and Walter Flemming, Germany, assignors to I. G. Farbenindustrie. Filed Mar. 26, 1932. No. 1,998,595.

Dewaxing lubricating oils—John A. Anderson, Chicago, Ill., assignor to Standard Oil Co. (Ind.). Filed July 9, 1932. No. 1,998,648.

Wax recovery—Chester E. Adams, Hammond, Ind., assignor to Standard Oil Co. (Ind.). Filed Sept. 29, 1933. No. 1,998,747.

Process for neutralizing organic acidity in petroleum lubricating oils—William B. Logan, White Plains, N. Y., assignor to Texas Co. Filed Oct. 8, 1931. No. 1,998,765.

Process for desulphurizing mercaptan-containing petroleum oil—Walter A. Schulze, Bartlesville, Okla., assignor to Phillips Petroleum Co. Filed Apr. 11, 1932. No. 1,998,849.

Process for desulphurizing mercaptan-bearing oil—Lovell V. Chaney and Walter A. Schulze, Bartlesville, Okla., assignors to Phillips Petroleum Co. Filed May 10, 1932. No. 1,998,863.

Method of deodorizing a hydrocarbon liquid—Albert E. Dunstan, London, England, assignor to Anglo-Persian Oil Co., same place. Filed Sept. 18, 1931. No. 1,999,041.

Refining or purification of benzol, petrol, and light spirits—Thornton Scott, Oakleigh, Chelford, England, assignor to Refiners Limited, Manchester, England. Filed Jan. 4, 1934. No. 1,999,112.

MISCELLANEOUS

Cylinder oil—Frederick H. MacLaren, Calumet City, and George F. Bowers, Chicago, Ill., assignors to Standard Oil Co. (Ind.). Filed Apr. 11, 1932. No. 1,998,767.

Process of absorbing carbon monoxide and/or diolefines from gases or vapors—Adrianus J. van Peski, Amsterdam, Netherlands, assignor to Shell Development Co. Filed Nov. 1, 1930. No. 1,999,159.

April 30, 1935

REFINING

Treating hydrocarbon oils—George Armistead, Jr., Port Arthur, Tex., and William T. Donaldson, Brooklyn, N. Y., assignors to Texas Co. Filed June 2, 1929. No. 1,999,270.

Hydrogenation process—Andre J. Kling and Jean M. J. D. Florentin, Paris, France, assignors to Societe des Carburants Synthetiques, same place. Filed May 4, 1933. No. 1,999,363.

Method of coking heavy fluent hydrocarbons—Charles W. Andrews, Chicago, Ill., and Roy S. Peterson, San Antonio, Tex., assignors to Brassert-Tidewater Development Corp., Chicago, Ill. Filed June 24, 1932. No. 1,999,437.

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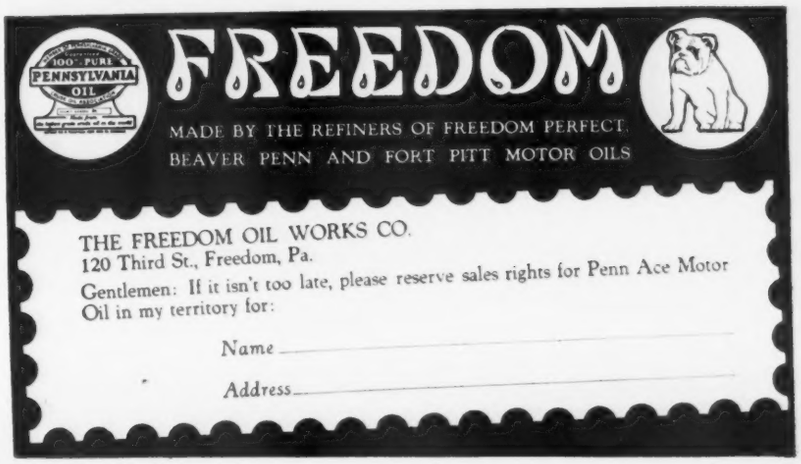
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Transactions in Oil Stocks on New York Stock Exchange

1934 High	1934 Low	1935 High	1935 Low	Listed Shares	Par Value	Company	Current Dividend	Last Div. Paid	Transactions Week Ended May 4 Sales Shares	High	Low	Last	Week's Change
55⅝	39	64½	48½	922,070	N.P.	Amerada Corp.	50cQ	Jan. 31, 35	8,800	*64½	61¾	64½	+ 2¼
40½	29½	31¼	29¾	2,290,412	$25	Associated Oil Co.	35c	Mar. 30, 35	10	31	31	31	— ¼
35¼	21½	25⅝	21⅜	2,696,652	25	Atlantic Refining Co.	25cQ	Mar. 15, 35	18,900	24⅛	22⅝	23¾	+ ¼
10	5⅞	9¼	5⅞	2,258,779	5	Barnsdall Corp.	....	May 11, 31	9,900	8¾	8¼	8½	— ¼
9¾	5	7½	6¾	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	10	7	7	7	— ⅛
14¼	7¼	8¾	6½	14,218,835	N.P.	Consolidated Oil Corp.	14c	Oct. 31, 34	18,500	8⅛	7¾	8	+ ⅛
112⅛	108	112	109½	132,771	$100	do pfd.	$2Q	Feb. 15, 34	.....	....	....	....	....
22¾	15¾	20	15⅛	4,722,652	5	Continental Oil Co.	12½c	Apr. 30, 35	27,600	20	19	19¾	— ⅛
23½	12	18⅞	11¾	413,333	$10	General Asphalt Co.	....	June 15, 32	3,100	15¾	14¾	15½	+ ⅝
29¾	12½	17¾	9½	95,841	100	Houston Oil Co.	....	.....	1,300	15⅞	15	15½	+ ½
5⅝	2½	3⅜	1½	678,234	25	do v.t.c.	....	Feb. 1, 32	1,400	2⅞	2⅝	2⅝	— ⅛
4¾	2⅜	2⅝	2⅛	1,207,132	10	Indian Refining Co.	....	Dec. 15, 20	100	2⅝	2⅝	2⅝	0
3⅜	¾	1⅞	¾	1,309,060	N.P.	Louisiana Oil Ref'g. Corp.	....	.....	300	1⅛	1	1	— ¼
23½	7¼	14½	7¼	40,000	$100	do pfd.	....	May 16, 32	.....	....	....	....	....
3¼	1⅛	1⅞	1	330,000	N.P.	Maracaibo Oil Exploration Co.	....	.....	100	1¼	1¼	1¼	— ⅜
63½	50	....	....	449,083	$100	Mexican Petroleum Co.	....	Apr. 20, 31	.....	....	....	....	....
14⅜	9⅛	12⅞	9½	1,857,912	N.P.	Mid-Continent Pet. Corp.	25c	Nov. 15, 34	6,600	12½	11¼	12	+ ⅞
15⅞	8½	12⅛	9⅜	6,648,052	N.P.	Ohio Oil Co.	15c	Dec. 15, 34	17,400	11⅝	11	11⅝	+ ⅜
11½	10⅝	11⅜	10⅜	4,699,885	$5	Pan Amer. Pet. & Transp. Co.	....	Mar. 15, 33	400	11¼	11¼	11¼	0
2½	⅝	1⅜	⅝	199,370	N.P.	Panhandle Prod. & Ref'g. Co.	....	.....	.....	....	....	....	....
21½	7	12	6½	17,994	$100	do pfd.	....	July 2, 23	.....	....	....	....	....
14¼	8¼	10⅛	7⅝	2,153,444	5	Petroleum Corp. of America.	50c	May 14, 34	1,000	9½	9¼	9½	0
20¾	13⅜	20	13⅜	4,439,450	N.P.	Phillips Petroleum Co.	25c	Mar. 1, 35	28,900	*20	18⅞	20	+ 1½
1⅛	⅜	⅝	⅜	1,184,817	$25	Pierce Oil Corp.	....	.....	8,400	⅜	¼	⅜	+ ⅛
10¾	4½	6⅛	3½	150,000	100	do pfd.	....	Feb. 1, 22	200	3⅞	3¾	3⅞	+ ⅛
2	⅞	1⅛	¾	2,500,000	N.P.	Pierce Petroleum Corp.	....	Feb. 16, 31	3,300	⅞	¾	¾	— ⅛
16¾	7¼	11¼	6½	1,050,000	$5	Plymouth Oil	25cQ	Mar. 30, 35	14,500	11	10	10⅝	+ ⅜
14⅞	6⅛	7⅞	5⅞	3,038,370	N.P.	Pure Oil Co.	....	Sept. 1, 30	8,100	7½	6¾	7⅜	+ ¼
80	49	61½	49⅝	130,000	$100	do 8% pfd.	....	Apr. 1, 33	60	59	59	59	0
39¼	28⅝	36¼	29½	425,342	$14.00	Royal Dutch Co. (N. Y. shares)	$1.35	July 31, 34	400	*36¼	34½	36¼	+ 2⅝
38⅜	20¾	33⅛	20¾	1,244,383	N.P.	Seaboard Oil of Del.	25cQ	Mar. 15, 35	21,800	*33⅛	29½	33⅛	+ 3⅞
26½	19	25	20⅜	56,148	L2	Shell Transport & Trading Co.	75c	July 23, 34	90	25	25	25	0
11½	6	7⅞	5½	13,070,625	N.P.	Shell Union Oil Corp.	....	June 30, 30	14,300	7¼	6⅞	7⅛	+ ⅛
89	57	79¾	63⅛	400,000	$100	do pfd. w.w.	....	July 1, 31	3,300	*79¾	75¾	78½	+ 2
16⅜	7¼	18¾	13½	461,000	10	Simms Petroleum Co.	50c	Feb. 1, 35	6,500	16½	15¼	16¼	+ ½
11½	6	9⅜	6½	1,100,069	25	Skelly Oil Co.	....	Dec. 15, 30	1,400	9¼	8½	9¼	+ ½
68⅛	51½	84	60	120,000	100	do pfd.	....	May 1, 31	400	82	79⅝	82	+ 5
19⅞	12½	14⅞	11	31,701,348	25	Socony Vacuum Oil Co.	15c	Mar. 15, 35	44,200	14¼	13⅝	14¼	+ ⅜
114	96½	116	111	764,925	100	S. O. Export Corp. pfd.	$2.50S.A.	Dec. 31, 34	200	114⅛	114	114	+ ¼
42⅞	26½	34⅝	27¾	13,102,900	N.P.	S. O. California	25cQ	Mar. 15, 35	26,900	*34⅝	32¾	34⅝	+ 1⅝
32¾	23¼	26	23	15,375,175	$25	S. O. Indiana	25c	Mar. 15, 35	22,100	*26	24⅞	26	+ ⅝
41	26	32	26½	320,000	10	S. O. Kansas	50c	Oct. 31, 34	300	28	†26½	28	— 2
50⅛	39¼	43⅞	35¾	25,740,965	25	S. O. New Jersey	††	Mar. 15, 35	39,600	*43⅞	41¾	43⅞	+ 1¾
74¼	51½	73	60½	1,590,406	N.P.	Sun Oil Co.	25cQ	Mar. 15, 35	1,800	*73	69⅞	73	+ 3½
118	100	121	115½	100,000	$100	do pfd.	$1.50Q	Mar. 1, 35	120	118¾	117	118¾	— ¾
3	1¼	3	1⅝	966,979	N.P.	Superior Oil Corp. (Del.)	....	.....	3,300	2¾	2½	2⅝	0
29⅜	19⅝	22	16½	9,851,236	$25	The Texas Corp.	25cQ	Apr. 1, 35	16,600	21¾	20½	21¼	— ¼
6½	2½	4¼	3¼	930,570	10	Texas Pacific Coal & Oil Co.	....	Dec. 31, 29	2,800	3¾	3⅝	3⅝	— ⅛
14⅜	8	10½	7⅝	5,998,919	N.P.	Tide Water Associated Oil Co.	....	Feb. 16, 31	8,600	10	9⅜	9⅞	+ ¼
86½	64½	95½	84	695,503	$100	do pfd. C. T. V.	$2.00	Apr. 1, 35	1,700	95½	94¼	95	+ 1
40	24	28¾	26¾	2,191,823	N.P.	Tide Water Oil Co.	35c	Mar. 30, 35	.....	....	....	....	....
100½	80	105¼	100	199,446	$100	do pfd.	$1.25Q	Feb. 15, 35	500	*105¼	105	105	0
20½	11½	18¾	14¾	4,386,070	25	Union Oil of California.	25cQ	Feb. 10, 35	11,200	18⅜	17¾	18⅜	+ ⅜
25¾	15⅝	26⅛	20⅞	1,200,000	N.P.	Union Tank Car Co.	30cQ	Mar. 1, 35	1,400	24⅞	23¾	24	— ⅞
3⅞	1	1⅜	⅝	759,538	N.P.	Warner Quinlan Co.	....	July 3, 30	200	1	⅞	⅞	— ⅛
5¾	2	2⅝	1	431,443	$5	H. F. Wilcox Oil & Gas Co.	....	May 10, 28	800	1¾	1⅝	1¾	— ¼

*New high. †New low. x Ex-div. **On accum. pfd. ††In Mission Corp. Stock.

Standard Oil Stocks on New York Curb Market

1934 High	1934 Low	1935 High	1935 Low	Shares Issued	Par Value	Company	Current Dividend	Last Div. Paid	Transactions Week Ended May 4 Sales Shares	High	Low	Last	Week's Change
11	6	6¼	6	40,000	$25	Borne Scrymser Co.	....	Oct. 15, 30	50	6⅛	6⅛	6⅛	0
38	26	38¾	30½	200,000	50	Buckeye Pipe Line Co.	75cQ	Mar. 15, 35	350	*38¾	37⅞	38⅝	+⅛
150	116	157	115	120,000	25	Chesebrough Mfg. Co.	$1.50	Mar. 29, 35	250	130	128	128	+ 4
14⅝	9⅜	14⅞	10	5,977,873	N.P.	Creole Petroleum Co.	....	.....	48,800	*14⅞	12⅞	14⅞	+ 1⅞
37	30	38	34	50,000	$100	Eureka Pipe Line Co.	$1Q	Feb. 1, 35	100	33½	33¼	33¼	— ¾
49½	33¼	54⅞	44	9,000,000	N.P.	Humble Oil & Refg. Co.	25cQ	Apr. 1, 35	11,400	*54⅞	49¾	54⅞	+ 4⅝
17⅞	12⅝	17⅛	15⅝	26,742,792	N.P.	Imperial Oil Ltd.	††25c S.A.	Dec. 1, 34	22,400	17⅛	16½	17⅛	+ ⅝
17½	12⅜	17	16⅛		N.P.	do registered	25cQ	June 1, 34	200	16½	16½	16½	— ⅛
6⅞	3¾	4½	3⅝	300,000	$10	Indiana Pipe Line Co.	††15c S.A.	Nov. 15, 34	300	4⅜	4⅛	4⅜	+ ⅛
33⅜	19⅜	33⅛	28	14,247,088	N.P.	International Pet. Co.	††56c S.A.	Dec. 1, 34	16,000	*33⅛	31	33	+ 1¾
9½	7	8⅝	6¾	513,000	$12.50	National Transit Co.	35c	Dec. 15, 34	.....	....	....	....	....
4¾	3	3⅝	3	100,000	5	New York Transit Co.	15c S.A.	Oct. 15, 34	.....	....	....	....	....
7	4⅜	6	5¼	120,000	10	Northern Pipe Line Co.	25c S.A.	June 2, 35	100	6	6	6	+ ½
91	83½	105⅛	90¼	580,796	100	Ohio Oil Co. pfd.	$1.50Q	Mar. 15, 35	2,300	*105⅛	103	104½	+ 1½
8½	3¾	11	7½	400,000	25	Penn Mex. Fuel Co.	....	Dec. 22, 33	.....	....	....	....	....
5½	3½	4¾	3⅞	100,000	10	Southern Pipe Line Co.	15c	Mar. 1, 35	.....	....	....	....	....
26½	17½	25⅜	21⅝	1,200,000	25	South Penn Oil Co.	30c	Apr. 1, 35	2,800	*25⅜	24⅞	25	+ ¼
47	41	52½	45¼	35,000	50	South West Pa. Pipe Lines	$1Q	Apr. 1, 35	.....	....	....	....	....
18⅛	14⅝	21⅝	18	2,606,983	10	S. O. Kentucky	15c	Mar. 15, 35	3,500	19	18¾	18⅞	+ ⅛
16⅞	8¼	10	7¾	190,822	25	S. O. Nebraska	....	June 20, 34	.....	....	....	....	....
28½	12⅜	16½	11½	752,465	25	S. O. Ohio	....	Apr. 16, 34	1,400	15½	14¼	15½	+ 1
95	77½	99	91	120,000	100	do 5% pfd.	$1.25Q	Apr. 15, 35	225	*99	95	99	+ 5
4¼	2⅝	2⅞	2¼	34,158	25	Swan Finch Oil Corp.	....	Dec. 1, 30	.....	....	....	....	....

*New high. †New low. ††Indiana Pipe Line .05c extra, Nov. 15; International Pet. Co. 44c, Dec. 1; Imperial Oil, 15c, spec., Dec. 1, '34.
x Ex dividend.

Elect Production Officers

NEW YORK—Bruce Barkis, Rio Grande Oil Co., Los Angeles, Calif. has been elected chairman of the California district of the American Petroleum Institute's division of production.

Vice-chairmen for 1935 are: A. H. Bell, Continental Oil Co., Los Angeles; W. L. Bagby, Shell Oil Co., Ventura; H. G. Barton, U. S. Geological Survey, Taft.

W. G. Corey, Pacific Gear and Tool Works, Los Angeles was elected treasurer and D. S. Kilgour, California Oil & Gas Association, Los Angeles, elected secretary.

Colonial Beacon Moves

NEW YORK—Colonial Beacon Oil Co. has moved its general offices from 155 East 44th Street to 30 Rockefeller Plaza in Rockefeller Center. This company is an affiliate of the Standard Oil Co. of New Jersey.

Oil and Royalty Stocks on New York Curb

1934 High	1934 Low	1935 High	1935 Low	Par Value	Company	Transactions Week Ended May 4 Sales Shares	High	Low	Last	Week's Change
1¼	½	⅝	⅜	N.P.	American Maracaibo..	900	⅝	⅜	⅝	+ ⅛
2⅞	1	1¼	⅝	N.P.	Arkansas Nat. Gas....	100	⅞	⅞	⅞	— ¼
2¾	⅝	1⅛	⅝	N.P.	do A.....	1,300	1	1	1	— ⅛
3⅞	1¾	3¼	2¼	$10	do pfd.....	300	*3¼	3⅛	3¼	+ ⅛
15⅝	12¾	15⅞	14½	N.P.	British Amer. Oil coup.	.....	....	....	....	....
5½	1½	3½	1⅝	$¼	Carib Syndicate.....	2,200	2⅞	2⅝	2⅞	+ ⅛
4¼	1¼	1½	¾	N.P.	Cities Service.....	13,700	1⅜	1¼	1⅜	0
26⅞	11¼	14	6½	$100	do pfd.....	1,300	13	12½	12½	— ½
2½	1⅛	1⅝	⅝	10	do pfd. B.....	300	1⅛	1⅛	1⅛	— ¼
23½	9	13½	6	100	do pfd. BB.....	10	11½	11½	11½	0
3¼	⅛	1	⅛	N.P.	Colon Oil Corp.....	1,000	⅞	⅝	⅝	— ¼
1¾	⅛	⅛	⅛	N.P.	Columbia Oil & Gas vtc.	100	⅜	⅜	⅜	0
2	1⅛	1⅝	1	$1	Consolidated Royalty..	100	*1⅝	1⅝	1⅝	+ 7/16
3⅜	⅛	⅞	⅜	N.P.	Cosden Oil.....	400	⅝	½	⅝	+ ¼
9	2½	2	1	$100	do pfd.....	.....	....	....	....	....
1¼	¾	⅞	⅝	N.P.	Crown Central Pet.....	1,200	¾	⅝	⅝	— 1/16
7½	4⅛	6	4¼	N.P.	Darby Petroleum.....	600	6	5⅝	5⅝	— ⅜
2¼	1	1¼	¾	N.P.	Derby Oil & Refg.....	200	*1¼	1¼	1¼	+ ¼
.....	....	20	20	N.P.	do pfd.....	.....	....	....	....	....
76¾	50	61	50¼	$25	Gulf Oil Corp.....	8,700	61	59	61	+ 1½
4⅛	1¼	4¼	1⅜	N.P.	Indian Ter. Illg. Oil A	400	3⅝	2½	2½	— 1⅜
4⅝	1¼	4¼	1⅜	N.P.	do B.....	300	3¾	2¼	2¼	— 1⅝
3	1⅛	2⅝	1⅞	N.P.	Kirby Petroleum.....	1,600	2⅛	2	2	0
⅞	⅛	½	⅛	$25	Leonard Oil Dev.....	400	⅛	⅛	⅛	0
6	3⅜	6⅝	3½	N.P.	Lion Oil Refg.....	500	6	5½	5½	— ⅛
8⅛	4¼	6¼	4½	N.P.	Lone Star Gas.....	3,500	5½	5¼	5¼	— ¼
8¾	5¼	6⅞	4	N.P.	Margay Oil Co.....	.....	....	....	....	....
2¼	1	1	⅞	N.P.	Mexico-Ohio Oil.....	.....	....	....	....	....
5	2⅝	2½	2	N.P.	Michigan Gas & Oil...	100	2⅛	2⅛	2⅛	+ ⅛
2⅞	1	1⅜	⅞	N.P.	Mid. States Pet. A vtc.	100	1¼	1¼	1¼	0
1⅛	¼	⅛	¼	N.P.	do B vtc.....	100	⅜	⅜	⅞	+ 1/16
¾	⅛	⅜	¼	$1	Mountain & Gulf.....	.....	....	....	....	....
5⅛	4	5	4⅛	10	Mountain Producers...	2,100	*5	4⅝	5	+ ½
18⅛	⅛	15⅛	13½	N.P.	National Fuel Gas....	4,500	*15⅛	14½	15	+ ½
2½	1⅜	2⅜	2	$5	New Bradford Oil.....	200	2⅛	2⅛	2⅛	0
3⅜	1¾	2⅝	2	N.P.	North Central Texas...	500	2½	2¼	2¼	— ¼
⅛	⅛	⅛	⅛	N.P.	North European.....	500	1/16	1/16	1/16	— 1/16
10⅜	8⅛	10¼	9½	N.P.	Oil Stocks Ltd. A.....	100	10⅜	10⅜	10⅜	+ ⅛
2⅜	⅞	2⅛	1¼	N.P.	Pantepec of Venezuela.	4,400	1½	1⅜	1⅜	0
⅜	1/16	⅛	⅛	N P.	Producers Royalty....	3,700	¼	1/16	1/16	— 1/16
63	33½	46	34¾	$100	Pure Oil 6% pfd.....	220	43	40	42	— 1
1½	¾	1	½	N.P.	Red Bank Oil.....	.....	....	....	....	....
1	⅛	⅜	⅛	N.P.	Reiter-Foster Oil.....	.....	....	....	....	....
4	½	1	⅝	$25	Richfield Oil pfd.....	.....	....	....	....	....
1¼	¾	1⅛	1		Root Refining.....	100	*1⅛	1⅛	1⅛	+ ⅛
8¼	3½	7	4	10	do conv. pr. pfd....	500	7	5⅜	7	+ 2⅞
.....	....	....	....	$10	Royalty Corp. pfd.....	.....	....	....	....	....
3⅛	⅞	1¼	⅝	N.P.	Ryan Consolidated....	.....	....	....	....	....
1	⅛	1	¾	$10	Salt Creek Consolidated	.....	....	....	....	....
7⅞	5	7	5½	10	Salt Creek Prod.....	3,600	*7	6⅝	7	+ ½
6	4⅞	5⅞	4¾	N.P.	Southland Royalty....	400	5⅞	5⅝	5⅝	0
2	1/16	1¼	1/16	$5	Sunray Oil.....	3,300	1	†1/16	1	+ 1/16
11	4⅜	6⅞	5	N.P.	Texon Oil & Land.....	900	5⅞	5½	5⅞	+ ⅛
1⅛	½	1/16	1/16	$5	Venezuela Petroleum..	5,500	⅞	¾	¾	— ⅛
5¼	2¾	4⅛	3½	1	Woodley Petroleum....	.....	....	....	....	....

*New high. †New low.

New York Bonds

Week Ended May 4

	High	Low	Last	Change
Atlantic Refg. deb. 5s...	108	107⅝	107⅞	+ ⅜
Calif. Pet. 5s.....	101¾	101½	101⅝	0
Calif. Pet. 5½s.....	101¾	101¾	101¾	0
Houston Oil 5½s '40....	96⅝	95½	96	0
Pan. Amer. Pet. of Calif.6s ctfs.....	37⅛	37	37⅛	+ ⅝
Phillips Pet. 5¼s '39....	103¾	103⅜	103⅝	— ⅛
Pure Oil 5½s '37.....	102	101½	101¾	+ ⅜
Pure Oil 5½s '40.....	102¼	101½	102¼	+1⅛
Richfield Oil of Calif. 6s.	30¼	30	30¼	+ ¼
Richfield Oil of Calif. 6s ctfs.....	30⅜	28	29½	+ ¼
Shell Union Oil 5s.....	103½	103⅛	103⅛	0
Shell Pipe Line 5s '52....	104	103½	103¾	+ ¼
Sinclair Con. Oil 7s A...	102½	102¼	102⅜	0
Sinclair Con. Oil 6½s B.	102½	102	102½	+ ½
Skelly Oil 5½s.....	102¾	102⅜	102½	0
S.O.N.Y. 4½s.....	103¾	103¼	103½	— ¼
Union Oil of Calif. 5s w.w.	102½	102¼	102¼	— ¼
Union Oil of Calif. 6s A..	120	119¾	119¾	— ⅛
Warner-Quinlan 6s.....	36⅜	31⅜	33¾	+1¾

Issues New Fuel Oil Standards

WASHINGTON — The commercial standard for fuel oils, revised in accordance with recommendations of the standing committee of the National Bureau of Standards, Aug. 24, 1934, and effective Feb. 15, 1935, has just been published under the title, Fuel Oils (Third Edition) Commercial Standard CS12-35.

The revised standard is for sale by the Superintendent of Documents, Washington, D. C., for 5 cents.

Pittsburgh Stock Exchange

Transactions Week Ended May 3, 1935

	Sales	High	Low	Last	Change Over Week
Ark. Nat. Gas....	60	1	1	1	— ⅛
do pfd.....	39	2⅞	2⅞	2⅞	+ ⅛
†Cities Serv.....	236	1¼	1	1	— ⅛
Col. Gas & Elec...	47	6⅛	5⅞	5⅞	— ⅝
†Continental Oil..	50	20	19⅞	19⅞	+ ¼
Devonian Oil.....	98	12	12	12	0
†Gulf Oil of Pa....	100	60	60	60	0
Lone Star Gas....	678	5½	5⅜	5⅜	— ⅛
† do 6 p.c. conv. pfd.....	117	84	82½	84	+2
† do 6½ p.c. pfd..	10	95⅜	95⅜	95⅜	+1½
Plymouth Oil.....	150	10⅞	10⅜	10⅜	— ⅜
†Socony-Vacuum..	421	14⅛	13¾	14	+ ⅛
†Stand. Oil of N.J.	345	43⅜	41	43⅜	+1⅜
Western Pub. Serv	3,697	4⅛	4	4⅛	+ ¼

†Unlisted.

Cleveland Stock Exchange

Transactions Week Ended May 4, 1935

	Sales	High	Low	Last	Change Over Week
Canfield Oil.....	.....	....	....	....	....
Nat'l Refining....	370	6½	6	6½	+ ½
do pfd.....	15	63	63	63	+3

New York Curb Bonds

Week Ending May 4

	High	Low	Last	Change
Cities Service 5s '50.....	48	41⅛	48	+5
Cities Service 5s '66.....	46½	40½	46½	+3⅛
Cities Service G. 5½s '42	82½	78	82½	+4½
Empire O & R 5½s '42..	63¼	60⅜	63¼	+2⅞
Gulf Oil 5s '37.....	104⅜	103¾	103¾	— ⅜
Gulf Oil 5s '47.....	106⅛	105½	105½	0

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Shell Union Reduces Net Loss By Two-Thirds In 1934

SHELL Union Oil Corporation and its subsidiaries reduced its net loss from $4,240,964.89 in 1933 to $1,353,900.54 in 1934, according to its annual report. This net loss for 1934 includes a net charge against income of $404,789.51 in connection with the debenture retirement.

Current assets on Dec. 31, 1934 were $62,932,491.82 and current liabilities were $23,863,558.03 compared to $78,399,162.76 and $21,615,112.02 respectively at end of 1933.

The company's funded debt was reduced $32,428,000 during 1934, but for this purpose $9,000,000 in 2½ per cent short-term notes were sold, leaving a net reduction of $23,428,000 which was paid out of the company's own funds. This will result in a reduction of more than $950,000 per year in debenture interest and, although the short-term notes will mature at the rate of $3,000,000 per year for the next three years, sinking fund obligations of $1,500,000 annually have been eliminated.

The company's funded indebtedness has been reduced from $126,334,500 to $56,208,500 in the past five years, the report stated.

At the end of 1934 the company had 32,107 employes, an increase of 15 per cent over the number at end of 1933. The dollar payroll was 20 per cent higher in 1934 than in 1933.

Net production of the operating subsidiaries was 35,307,953 barrels and 33,603,324 barrels were purchased to complete the company's requirements. These purchases were necessary because of production restrictions placed on company wells by proration.

Intangible development and drilling costs totaled $6,363,542 in 1934 compared with $2,833,131 the previous year. In 1934 503 wells were drilled, increasing the company's shut-in production by 45 per cent. Further additions to proven reserves were made in California by extension of production limits in the Capitan and Edison fields, and of deep production in the Inglewood field. Active development work continued in other areas on the Pacific coast and other producing sections of the country.

Consolidated income account for year 1934 compares as follows:

	1934	1933
Gross op income	$186,707,730	.....
Costs, exp and ord taxes..	154,910,965	.....
Depr, depl, intang devel exp, amortiz and aband	30,985,950	.....
Profit	$810,815	.....
Other income	*2,709,238	.....
Total income	$3,520,053	$8837,817
Int and discount	3,736,549	4,412,473
Prov for inc taxes	677,714	.....
Minority interest	54,901	.....
Loss	$949,111	$5,250,290
Prem on debs call for redemption	476,640	.....
Excess of par over cost of debt ret'd	71,850	1,009,325
Net loss	$1,353,901	$4,240,965

*Including equity of $110,588 net, in operating results of affiliated companies, not consolidate. †After deducting $1,738,664 unamortized balance of debenture discount and expense. ‡Profit. §Loss.

Consolidated balance sheet of Shell Union Oil Corp., and subsidiaries as of Dec. 31, 1934, compares as follows:

Assets	1934	1933
Crude oil, etc	$31,062,306	$33,236,138
Mat and supplies	4,991,992	4,178,262
Accts and nts rec, etc., after res	12,689,553	12,500,926
Short term deposits	.....	12,573,068
Cash	8,101,329	6,771,941
Govt securities, etc	6,077,312	9,138,828
†Prop account	260,050,464	270,029,142
Investments	15,622,253	16,463,633
Accts and nts rec, etc. (not current)	3,078,580	3,376,342
Deferred charges	6,234,083	6,727,963
Deficit	18,435,042	17,081,141
Total	$366,352,914	$392,077,384
Liabilities		
Accounts payable	$8,970,682	$15,422,751
Nts pay and prop purch oblig (curr)	3,151,763	1,095,050
Accruals	2,958,953	1,908,506
Preferred stock	40,000,000	40,000,000
*Common stock	233,672,821	233,672,821
Funded debt	47,208,500	79,636,500
Min int subs	235,308	248,996
Nts pay and prop purch oblig (not curr)	6,372,727	1,903,956
Tax reserve	8,782,160	3,188,804
Special reserve	15,000,000	15,000,000
Total	$366,352,914	$392,077,384

*Represented by 13,070,625 no-par shares. †After depletion, depreciation, intangible development expenditures and amortization.

* * *

Continental Oil Co.

Continental Oil Co. and subsidiaries increased net profit from $1,306,954 in 1933 to $4,865,358 in 1934 by increasing gross income by more than 25 per cent while operating charges increased only 18 per cent. The 1933 profit included profit of $1,306,954 from sale of an English subsidiary.

The cash position of the company permitted it to pay off during the year all its outstanding long term obligations with the exception of a few sundry mortgages on marketing properties and deferred obligations which amounted to $108,410 on Dec. 31, 1934. The saving in interest to maturity on these obligations was $1,104,250.

Current assets on Dec. 31, 1934 were $31,466,726 compared with $35,408,895 at end of 1933. Current liabilities were $6,076,387 compared with $5,780,098 end of previous year.

Capital expenditures totaled $6,125,794 classified as follows: leases, $1,084,116; wells and equipment, $3,332,939; manufacturing, $365,595; marketing, $922,194; oil pipelines, $68,570; automobile and trucks, $132,822; and all others $219,822.

On Dec. 31, 1934 the company held under lease 1,643,540 acres, having acquired 284,994 acres during the year.

Net production of crude oil was 13,421,459 barrels compared with 13,236,438 in 1933. Of 182 new wells drilled last year 148 were productive. In 1933 84 wells were drilled of which 62 were productive.

A higher level of efficiency in operation of present marketing facilities was attempted by the company rather than expansion of the number of outlets. Sales of refined products exceeded the previous peak of 1930 by 4.3 per cent and were increased over 1933 by 10.35 per cent.

Consolidated balance sheet of Continental Oil Co. and subsidiaries as of Dec. 31, 1934, compares as follows:

Assets	1934	1933
Cash	$6,240,859	$11,519,648
U. S. Gov't secur. at cost	20,000	505,000
Notes and accts. rec. after res.	4,166,976	4,102,818
Invent. of crude oil and ref. prod.	†20,224,950	18,636,892
Mat. and sup. at cost less res.	636,299	542,448
Other cur. assets	177,640	102,089
Inv. in and adv. to contr. cos. after res.	4,047,726	4,817,400
Other invest. and adv. after res.	7,572,262	6,267,189
Deposits for red. of bonds, int., etc.	466,099	89,067
Unadj. debits, etc.	872,782	964,163
‡Prop. accounts	40,647,154	41,922,070
Def. charges	799,401	806,757
Total	$85,872,147	$90,275,541
Liabilities		
Accounts payable	$4,247,819	$5,170,194
Accrued liabilities	1,703,118	609,906
Prov. for fed. taxes	125,450	.....
Due employes	.....	211,815
Pur. money oblig.	.....	575,408
Funded debt	$.....	7,450,000
Unred. bonds, int. coupons, etc.	466,099	89,066
‡Capital stock	$23,692,966	23,692,966
Minority interest	209,037	212,658
Res. for insurance	1,487,030	1,487,030
Res. for annuities	1,368,671	1,437,156
Res. for conting. etc.	791,254	789,690
Paid-in surplus	46,949,207	46,273,792
Earned surplus	4,831,496	2,275,860
Total	$85,872,147	$90,275,541

*After depreciation, depletion and intangible development costs. †At lower than market. ‡Par $5. §Including $55,871 shares held in treasury. ‡Retired during year.

Consolidated income account for

Oil Dividends
Declared Last Week

Company	Amount	Record	Payable
Royalite Oil Co.	75c	May 23	June 7
Standard of Cal. q	25c	May 15	June 15
Standard of N. J. s a	50c	May 16	June 15
Tide Water Oil pfd. q	$1.25	May 9	May 15

Dividends Waiting Payment

Buckeye Pipe Line q	75c	May 28	June 15
Cons. Oil 8% pfd., q	2.00	May 1	May 15
Indiana Pipe Line s.	15c	Apr. 26	May 15
Mid-Continent Pet.	15c	May 6	June 1
Phillips Petroleum	25c	May 3	June 1
Sun Oil q	25c	May 25	June 15
Sun Oil pfd. q	$1.50	May 10	June 1
Union Oil of Calif. q	25c	Apr. 19	May 10

year 1934, compares as follows:

	1934	1933
Gross earn.	$65,721,348	$52,338,811
Cost, exp. and tax.	54,862,127	46,472,316
Oper. prof.	$10,859,221	$5,866,495
*Other inc.	1,448,486	1,549,046
Total inc.	$12,307,707	$7,415,541
Interest, etc.	351,626	¶561,173
Depreciation	3,921,688	4,029,190
Depletion, etc.	683,822	702,782
Intang. dev. cost	2,210,462	1,239,258
Adj. of inv.	.....	.....
Min. int.	12.252	10.446
Profit	$5,127,857	$872,692
Federal tax	125,450	.....
†Prem. and exp. on bds.	246,797	.....
Profit	$4,755,610	$872,692
Prof. on sale of invest., etc.	100,748	1,403,168
Net profit	$4,865,358	$2,275,860
Dividends	2,341,274	.....
Surplus	$2,524,084	$2,275,860

*Includes equity in earnings of controlled companies not consolidated, after reserve for losses. †Premium and expense on bonds purchased or called for redemption. ¶Includes premium and expense on bonds purchased or called for redemption.

* * *

Standard of California

The most important event of 1934 to the Pacific Coast oil industry was adoption of the Pacific Coast Petroleum Agency and Refiners' agreements, according to the annual report for 1934 of the Standard Oil Co. of California. The plan has proved successful and effective, the report continues, and very definitely saved the industry on the Pacific coast from complete chaos.

Just how successful the agreements were is testified to by the report which shows earnings of $18,327,807, equal to $1.40 a share in 1934 compared with earnings of $7,540,902, equal to 58 cents a share in 1933.

The consolidated balance sheet as of Dec. 31, 1934 shows all foreign operating and exploratory companies as investments at book value instead of consoildating them as wholly owned subsidiaries. Changing conditions of international trade and settlements and the delays in receiving reports on foreign operation were given as reasons for the change.

Daily average crude oil production increased 4393 barrels over 1933 to 103,058 barrels in 1934. Crude runs at refineries averaged 117,025 barrels daily in 1934 compared with 111,658 the year before.

Current assets as of Dec. 31, 1934 totaled $89,069,767 compared with $92,108,201 in 1933 while current liabilities were $8,948,933 against $6,817,910 in 1933.

On Dec. 31, 1934 the company had a total of 3559 completed oil and gas wells of which 1324 were shut in, all but 50 of which were in California. During the year, 87 wells were completed and 27 were abandoned.

Thirteen producing wells were completed by the company on Bahrein Island, in the Persian Gulf. Production from these wells was controlled to conform to demand. A submarine line for loading crude oil into tankers was completed, and a permanent camp for employes was started.

Exploration work in Saudi Arabia, on a concession of about 165,000 square miles was continued, and plans for drilling operations on a large geological structure located within a few miles of the Persian Gulf were being made.

The company's share of earnings of unconsolidated affiliated companies exceeded dividends received from such companies in 1934 by $142,837.

Consolidated income account for year 1934, compares as follows:

	1934	1933
Sales	$130,985,836	.....
Costs, exp. and ord. taxes	94,798,487	.....
Operating profit	$36,187,349	$26,501,473
Depr., depl., and amort.	16,937,174	17,143,177
Profit	$19,250,175	$9,358,296
Other income (net)	749,632	*1,497,394
Total income	$19,999,807	$7,860,902
Fed. taxes, etc.	1,652,000	300,000
Sub. pfd. divs.	20,000	20,000
Net profit	$18,327,807	$7,540,902
Patent Co. divs.	13,049,479	16,308,625
Surplus	$5,278,328	†$8,837,723

*Debit. †Deficit.

Consolidated balance sheet of Standard Oil Co. of California as of Dec. 31, 1934, compares as follows:

Assets	1934	1933
Cash	$25,007,229	$16,899,307
Mark. securities	6,624,672	5,680,089
Accounts rec.	16,066,758	20,287,527
Materials and sup.	5,597,350	6,733,691
Notes and accts. rec. (not cur.)	1,851,608	.....
Oil inventory	35,773,758	42,429,151
Bal. in closed bks.	295,853	.....
Other current assets	.....	78,436
*Prop., plt. and equip.	437,191,072	446,139,358
Investments	32,234,106	23,044,534
S. O. of Cal. stock held by subsid.	‡3,704,107	.....
Deferred charges	4,761,764	6,466,960
Total	$569,108,277	$567,759,053
Liabilities		
Accts. pay., etc.	$5,074,503	$4,469,737
Accrd. fed. tax, etc.	3,738,879	2,258,868
Other current liab.	135,552	89,306
†Capital stock	327,572,500	327,572,500
Sub. pfd. stock	400,000	400,000
Deferred credits	391,007	623,132
Reserves	20,062,827	18,715,294
Capital surplus	167,947,620	174,268,157
Earned surplus	43,785,388	39,362,059
Total	$569,108,277	$567,759,053

*After depreciation, depletion and amortization. †Represented by 13,102,900 no-par shares. ‡Consists of 88,146 shares at cost.

L. E. Ulrope Promoted

NEW YORK, May 3.—L. E. Ulrope has been named assistant wholesale manager of Esso Marketers to succeed H. G. Parkhurst, who has resigned.

Mr. Ulrope started with the Standard Oil Co. of New Jersey at Newark, in 1913. At the time of his latest promotion he was division manager of the Standard Oil Co. of Pennsylvania, with headquarters at Philadelphia.

The Esso Marketers group is composed of the Standards of New Jersey, Pennsylvania, Louisiana and Colonial Beacon Oil Co.

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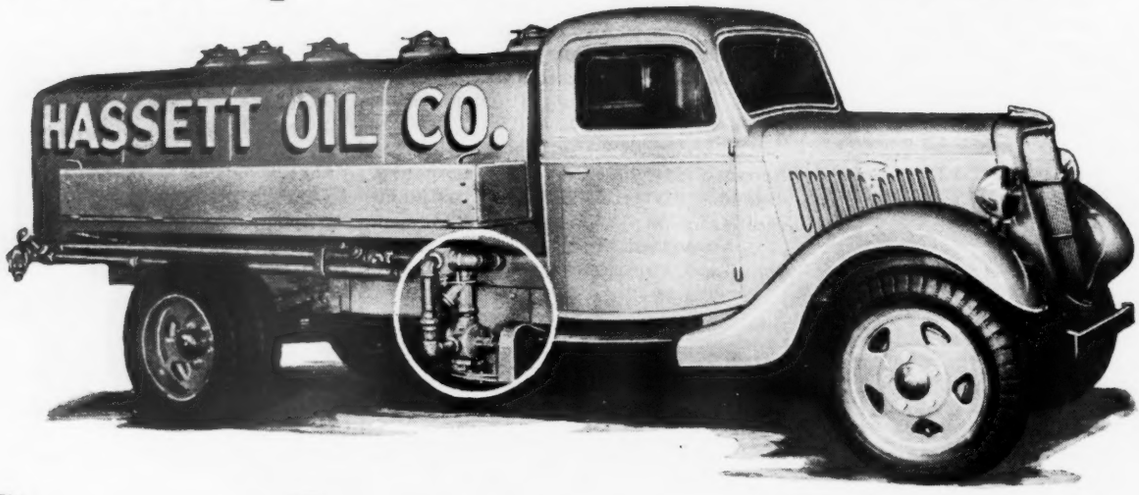

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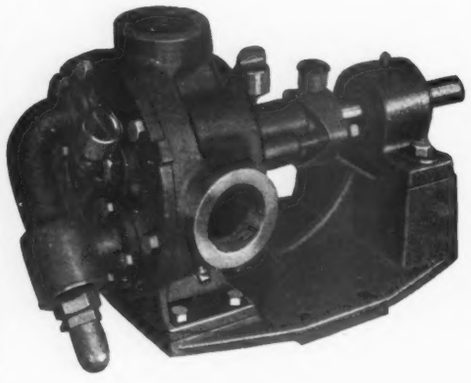

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